

Data analysis : Optimal stocking in lodgepole pine stands with topkill.
USDA Forest Service, Rocky Mountain Research Station
Research Work Unit No. 4152

Report submitted by:
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October 12, 1998

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Materials included in this report:

As per section 1(a) of the Research Agreement:

1. Printouts of the raw and transformed data sets used in the analysis.
2. A list of the data items used in these sets and explanations of the calculations used for each item.

As per section 1(b) of the Agreement:

Plot summary tables including all requested data items. These are included as tables 1 through 22.

As per section 1(c) of the Agreement:

Summary tables displaying the total change and percent change in total sapwood basal area for the years 1991-1997. These are included as tables 23 and 24.

Comandra Growth Study

Data Items in transformed data set:

1. Frequency- and T_ trees is number of living and dead trees in plot
2. Grd_ tree- indicates if tree was girdled or not 0= no and 1 = yes
3. BA 90-97 is the average BA per tree based on dbh squared X .005454. Units are square feet.
4. DBH 91-97 is the average DBH for measured trees on each plot. Units are inches.
5. Quadratic mean diameter is the average basal area of the plot/ .005454 and then square root of this value. Units are inches
6. HRT 91-97 is the average heart wood radius for each plot based on the trees measured each year. Units are inches.
7. SAP 91-97 is the average sapwood basal area per tree for each plot based on the average of the trees measured each year. Sapwood basal area was derived from heartwood and sapwood radii. The two radii were added, X 2, Squared, X .005454 to get wood basal area and then heartwood basal area was subtracted. Heartwood basal area is 2 X hrt(91-97) , squared, X .005454. Units are square feet.
8. T_BA (91-97) is the total basal area and is BA X total number of trees(Frequency) in plot / Hectors in plot. Units are square feet per hector.
9. T_SPBA (91-97) is the total sapwood area and is SAP X number of trees/ hectors in plot. Units are square feet per hector.
10. Rad 10 (91-97) is the average of the last 10 year radial growth of the trees measured that year. Units are inches.
11. Rad 5 (91-97) is the average of the last 5 year radial growth of the trees measured that year. Units are inches.
12. StmLn (91-97) is the average stem length of all trees measured on the plot that year. Units are feet.

13. Crnht (91-97) is the average distance from ground to compact base of crown on trees measured that year. Units are feet.
14. Crntp (91-97) is the height from ground to top of live grown. Units are feet.
15. CSAPBA (92-97) is the change in the sap wood basal area based on the trees measured that year compared to 1991.
16. T_den is the number of stems per hec. based on the total number of stems in 1991.

Data items in raw data sets.

Identification Data Set.

1. Block is the number of the four locations where this study was installed
2. Plot is the treatment area (1-5)
3. Treatment is the type of density and amount of girdled trees. (1= well stocked/no damage, 2= well stocked/minor damage, 3= well stocked/severe damage, 4=over stocked/minor damage, 5=over stocked/severe damage.
4. Tag is the tree tag number.
5. Crown class (1=dominate, 2=codominate, 3=intermediate, 4=suppressed)
6. Rank-Thinning rank (1= definite keep, 2=good keep, 3= adequate, 4= good to drop, 5= definitely drop)
7. Easting is the location of trees in relation to southwest corner of plot. Units are feet.
8. Northing is the location of trees in relation to southwest corner of plot. Units are feet.

Observation Data For 1990:

1. Grd Tree is the treatment (1=none, 2=girdle, 3=remove)
2. Girdle is the height to girdle is the distance from ground to girdle. Units are feet.
3. DBH is the diameter in 1990 at 4.5 feet. Units are inches.

Observation Data for 1991-97:

1. Block
2. Plot
3. Tag
4. Stat is tree status (0=live, 1= dying, 2=dead)
5. dbh is diameter of tree at 4.5 feet. Units are inches
6. STMLN is stem length is distance from ground to top of live or dead top. Units are feet.
7. CRNHT is height of live crown is distance from ground to bottom of compact live crown. Units are feet
8. Crown is the width of crown in feet.
9. CRNTP is height of live crown top is distance from ground to top of live crown. Units are feet.
10. RAD_05 is Five-year radial growth which is the radial distance of the last 5 years growth rings at dbh. Units are inches.
11. RAD_10 is ten-year radial growth which is the radial distance of the last 10 years growth rings at dbh. Units are inches.
12. HRT is the heartwood radius which is the radius of the heartwood at dbh. Units are inches.

13. Sap is sapwood radius which is the radial distance of sapwood between bark and heartwood.

Comments on Data:

1. Block 4 was not measured in 1995.

**Table 1: 1990 Data : Pretreatment conditions of lodgepole pine study plots:
Optimum stocking in stands with topkill.**

Block	Plot	Stand age (years)	Plot area (acres)	Site Index	# trees	QMD (in.)	Density (trees/acre)	Total BA ft. ² /acre
1	1	89	0.15	51	72	6.87	480	123.6
1	2	89	0.15	54	90	6.5	600	138.5
1	3	89	0.15	49	73	6.05	730	145.7
1	4	89	0.15	57	91	6.92	607	158.7
2	1	87	0.10	45	148	5.14	987	142.7
2	2	87	0.15	48	150	5.25	1000	150.6
2	3	87	0.15	50	116	5.65	773	134.9
2	4	87	0.15	47	106	4.96	1060	142.4
3	1	47	0.10	59	69	5.03	460	63.6
3	2	47	0.15	57	106	5.32	707	109.3
3	3	47	0.15	58	91	4.46	607	66.0
3	4	47	0.15	54	75	5.12	500	71.6
3	5	47	0.15	70	92	4.19	613	58.8
4	1	41	0.15	53	103	3.99	687	59.9
4	2	41	0.15	62	114	3.32	760	45.8
4	3	41	0.15	51	121	3.3	807	48.0
4	4	41	0.15	58	112	3.31	747	44.7
4	5	41	0.15	58	112	2.98	747	36.2

**Table 2 : 1991 Post - treatment conditons lodgepole pine study plots : Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees	QMD	Density trees/ha	Total BA ft. ² /acre	Sapwood BA ft. ² /acre	5 year radial growth (in.)	10 year radial growth (in.)	% trees girdled
1	1	52	7.19	347	97.9	60.8	0.13	0.26	0.0
1	2	55	7.12	367	101.3	49.3	0.12	0.26	24.4
1	3	62	6.22	620	131.0	73.6	0.11	0.22	9.6
1	4	90	6.94	600	157.5	84.7	0.12	0.25	39.6
2	1	88	5.81	587	108.0	60.7	0.12	0.24	24.3
2	2	123	5.60	820	140.0	67.0	0.08	0.17	32.7
2	3	73	6.50	487	112.1	50.0	0.10	0.21	0.0
2	4	77	5.34	770	119.8	63.9	0.10	0.22	4.7
3	1	61	5.23	407	60.6	42.8	0.30	0.61	11.6
3	2	14	5.32	693	107.2	79.3	0.31	0.64	32.1
3	3	72	4.81	480	60.4	43.6	0.32	0.62	25.3
3	4	73	5.11	487	69.3	52.2	0.30	0.61	14.7
3	5	92	4.19	613	58.8	45.7	0.35	0.69	0.0
4	1	99	3.98	660	57.0	39.3	0.33	0.69	38.8
4	2	85	3.48	567	37.5	31.5	0.32	0.71	29.0
4	3	119	3.32	793	47.8	37.4	0.39	0.83	14.9
4	4	83	3.57	553	38.4	29.5	0.41	0.53	10.7
4	5	112	2.93	747	36.2	28.3	0.39	0.81	0.0

**Table 3 : 1992 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	12	347	94.9	50.1	0.14	0.25
1	2	15	367	97.5	37.8	0.10	0.23
1	3	14	620	133.7	63.0	0.08	0.17
1	4	24	600	154.7	76.8	0.11	0.21
2	1	24	587	94.5	50.5	0.08	0.15
2	2	37	820	131.4	69.0	0.06	0.14
2	3	14	487	99.9	41.8	0.09	0.20
2	4	15	770	117.7	49.5	0.10	0.22
3	1	13	407	82.5	53.3	0.27	0.61
3	2	21	693	116.5	72.5	0.30	0.64
3	3	15	480	71.3	47.1	0.29	0.60
3	4	15	487	73.0	46.5	0.28	0.63
3	5	19	613	54.8	31.3	0.29	0.59
4	1	21	660	69.8	44.0	0.26	0.58
4	2	18	567	41.3	28.0	0.29	0.64
4	3	24	793	57.3	34.2	0.37	0.79
4	4	17	553	48.1	26.0	0.42	0.91
4	5	23	747	39.1	22.2	0.37	0.81

**Table 4 : 1992 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For live trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	11	347	95.4	53.6	0.15	0.25
1	2	11	367	100.9	40.9	0.10	0.24
1	3	13	620	133.7	63.6	0.08	0.17
1	4	16	600	159.3	79.0	0.10	0.22
2	1	16	587	99.6	51.4	0.08	0.15
2	2	21	820	149.1	79.5	0.07	0.15
2	3	14	487	99.9	41.8	0.09	0.20
2	4	15	770	117.7	49.5	0.10	0.22
3	1	13	407	82.5	53.3	0.27	0.61
3	2	21	693	116.5	72.5	0.30	0.64
3	3	15	480	71.3	47.1	0.29	0.60
3	4	15	487	73.0	46.5	0.28	0.63
3	5	19	613	54.8	31.3	0.29	0.59
4	1	20	660	69.3	43.6	0.26	0.58
4	2	17	567	43.0	29.1	0.29	0.64
4	3	24	793	57.3	34.2	0.37	0.79
4	4	17	553	48.1	26.0	0.42	0.91
4	5	23	747	39.1	22.2	0.37	0.81

**Table 5 : 1992 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dying trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	2	367	102.1	41.3	0.10	0.20
1	3	1	620	134.2	54.8	0.05	0.15
1	4	2	600	254.9	126.8	0.13	0.23
2	1	1	587	115.2	58.7	0.05	0.15
2	2	2	820	150.4	27.0	0.08	0.13
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	1	567	11.2	8.9	0.30	0.64
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 6 : 1992 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dead trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	1	347	90.0	11.8	0.10	0.25
1	2	2	367	74.5	16.9	0.10	0.25
1	3	0	620				
1	4	6	600	109.8	54.1	0.12	0.21
2	1	7	587	79.9	47.3	0.08	0.15
2	2	14	820	102.0	59.1	0.06	0.14
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	1	660	79.5	52.2	0.30	0.70
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 7 : 1993 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	109.4	51.1	0.10	0.19
1	2	13	367	112.8	64.1	0.10	0.20
1	3	13	620	120.4	64.5	0.09	0.20
1	4	21	600	179.5	88.7	0.10	0.24
2	1	20	587	119.4	69.0	0.09	0.19
2	2	30	820	129.0	63.4	0.07	0.14
2	3	15	487	112.1	47.7	0.08	0.18
2	4	17	770	114.9	71.9	0.07	0.17
3	1	12	407	54.7	30.7	0.23	0.45
3	2	21	693	162.8	101.1	0.24	0.56
3	3	15	480	67.2	39.6	0.23	0.53
3	4	15	487	74.4	53.5	0.30	0.60
3	5	19	613	66.5	44.8	0.28	0.62
4	1	20	660	72.6	41.1	0.26	0.59
4	2	20	567	44.2	32.7	0.25	0.56
4	3	24	793	56.4	34.0	0.34	0.76
4	4	17	553	51.8	26.6	0.39	0.83
4	5	23	747	40.6	21.3	0.35	0.76

**Table 8 : 1993 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For live trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	109.4	51.1	0.10	0.19
1	2	10	367	110.4	65.7	0.11	0.22
1	3	12	620	119.6	65.7	0.09	0.20
1	4	16	600	173.7	91.2	0.10	0.23
2	1	15	587	134.3	76.1	0.10	0.21
2	2	19	820	135.9	74.2	0.07	0.15
2	3	15	487	112.1	47.7	0.08	0.18
2	4	16	770	106.5	68.4	0.07	0.17
3	1	12	407	54.7	30.7	0.23	0.45
3	2	21	693	162.8	101.1	0.24	0.56
3	3	15	480	67.2	39.6	0.23	0.53
3	4	15	487	74.4	53.5	0.30	0.60
3	5	19	613	66.5	44.8	0.28	0.62
4	1	20	660	72.6	41.1	0.26	0.59
4	2	17	567	48.6	36.7	0.25	0.56
4	3	24	793	56.4	34.0	0.34	0.76
4	4	17	553	51.8	26.6	0.39	0.83
4	5	23	747	40.6	21.3	0.35	0.76

**Table 9 : 1993 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dying trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	1	620	130.0	49.8	0.10	0.25
1	4	1	600	265.1	42.1	0.10	0.20
2	1	0	587				
2	2	0	820				
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	3	567	19.3	10.3	0.25	0.52
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 10 : 1993 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dead trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	3	367	120.7	58.9	0.07	0.15
1	3	0	620				
1	4	4	600	181.3	90.3	0.13	0.29
2	1	5	587	47.7	47.8	0.07	0.13
2	2	11	820	117.2	44.7	0.06	0.13
2	3	0	487				
2	4	1	770	249.0	128.1	0.10	0.20
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 11 : 1994 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	97.7	54.9	0.18	0.35
1	2	12	367	107.0	48.4	0.17	0.29
1	3	13	620	155.6	88.9	0.13	0.25
1	4	19	600	155.0	85.8	0.11	0.24
2	1	15	587	98.3	68.5	0.10	0.20
2	2	23	820	155.2	77.2	0.10	0.21
2	3	15	487	127.2	55.9	0.09	0.20
2	4	15	770	129.1	65.3	0.08	0.17
3	1	12	407	64.6	31.6	0.20	0.46
3	2	21	693	122.5	67.9	0.20	0.47
3	3	14	480	66.3	38.7	0.24	0.54
3	4	15	487	91.5	55.5	0.24	0.56
3	5	18	613	62.9	39.1	0.29	0.58
4	1	20	660	72.3	31.8	0.19	0.45
4	2	16	567	48.4	25.8	0.21	0.48
4	3	25	793	74.0	33.5	0.31	0.70
4	4	17	553	54.9	28.2	0.31	0.70
4	5	22	747	73.1	41.9	0.30	0.69

**Table 12 : 1994 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For live trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	97.7	54.9	0.18	0.35
1	2	10	367	114.8	50.4	0.18	0.32
1	3	12	620	157.4	93.3	0.13	0.26
1	4	17	600	149.8	84.4	0.11	0.24
2	1	15	587	98.3	68.5	0.10	0.20
2	2	19	820	156.3	76.1	0.09	0.21
2	3	15	487	127.2	55.9	0.09	0.20
2	4	15	770	129.1	65.3	0.08	0.17
3	1	12	407	64.6	31.6	0.20	0.46
3	2	21	693	122.5	67.9	0.20	0.47
3	3	14	480	66.3	38.7	0.24	0.54
3	4	15	487	91.5	55.5	0.24	0.56
3	5	18	613	62.9	39.1	0.29	0.58
4	1	20	660	72.3	31.8	0.19	0.45
4	2	16	567	48.4	25.8	0.21	0.48
4	3	25	793	74.0	33.5	0.31	0.70
4	4	17	553	54.9	28.2	0.31	0.70
4	5	22	747	73.1	41.9	0.30	0.69

**Table 13 : 1994 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dying trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft ² /acre	Sapwood BA ft ² /acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	1	620	134.2	69.9	0.10	0.20
1	4	0	600				
2	1	0	587				
2	2	0	820				
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 14 : 1994 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dead trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	2	367	68.4	38.4	0.10	0.19
1	3	0	620				
1	4	2	600	198.7	97.5	0.13	0.28
2	1	0	587				
2	2	4	820	150.0	82.4	0.10	0.22
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 15 : 1995 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	116.7	50.4	0.16	0.31
1	2	10	367	112.3	57.8	0.13	0.25
1	3	14	620	135.3	66.4	0.13	0.24
1	4	17	600	172.6	96.6	0.18	0.31
2	1	15	587	129.3	79.2	0.29	0.45
2	2	19	820	173.3	105.4	0.23	0.36
2	3	15	487	132.2	65.9	0.23	0.33
2	4	15	770	142.4	68.4	0.25	0.37
3	1	12	407	70.7	24.7	0.35	0.60
3	2	21	693	112.8	44.7	0.33	0.58
3	3	14	480	82.8	31.5	0.33	0.58
3	4	14	487	93.7	28.8	0.37	0.66
3	5	19	613	102.2	38.3	0.41	0.76
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 16: 1995 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For live trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	116.7	50.4	0.16	0.31
1	2	10	367	112.3	57.8	0.13	0.25
1	3	12	620	135.1	66.0	0.14	0.25
1	4	16	600	175.0	96.9	0.19	0.33
2	1	15	587	129.3	79.2	0.29	0.45
2	2	17	820	172.0	106.5	0.24	0.37
2	3	15	487	132.2	65.9	0.23	0.33
2	4	15	770	142.4	68.4	0.25	0.37
3	1	12	407	70.7	24.7	0.35	0.60
3	2	21	693	112.8	44.7	0.33	0.58
3	3	13	480	86.7	32.8	0.34	0.60
3	4	14	487	93.7	28.8	0.37	0.66
3	5	19	613	102.2	38.3	0.41	0.76
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 17 : 1995 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dying trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	1	620	130.0	66.1	0.10	0.20
1	4	0	600				
2	1	0	587				
2	2	1	820	219.1	122.5	0.05	0.10
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	1	480	32.1	15.1	0.20	0.40
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 18 : 1995 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dead trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	1	620	142.9	71.5	0.10	0.25
1	4	1	600	134.0	92.2	0.10	0.15
2	1	0	587				
2	2	1	820	150.4	68.8	0.20	0.30
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	0	660				
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 19 : 1997 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For all trees.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	106.8	61.5	0.11	0.17
1	2	10	367	101.5	39.9	0.08	0.14
1	3	14	620	139.5	74.1	0.05	0.10
1	4	20	600	179.0	92.9	0.07	0.13
2	1	16	587	108.2	49.3	0.05	0.10
2	2	21	820	162.5	65.9	0.05	0.08
2	3	14	487	118.9	46.2	0.05	0.08
2	4	17	770	123.1	47.3	0.05	0.09
3	1	12	407	81.3	30.8	0.08	0.20
3	2	20	693	117.2	55.6	0.12	0.26
3	3	15	480	80.3	37.1	0.10	0.23
3	4	14	487	78.7	34.2	0.09	0.22
3	5	19	613	89.6	42.3	0.10	0.24
4	1	21	660	66.1	20.3	0.09	0.23
4	2	17	567	52.6	22.5	0.08	0.20
4	3	25	793	78.0	17.9	0.12	0.29
4	4	16	553	67.6	21.9	0.13	0.33
4	5	23	747	67.1	24.9	0.12	0.30

**Table 20 : 1997 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For live trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	10	347	106.8	61.5	0.11	0.17
1	2	10	367	101.5	39.9	0.08	0.14
1	3	11	620	136.4	70.0	0.05	0.09
1	4	15	600	183.6	92.9	0.08	0.14
2	1	16	587	108.2	49.3	0.05	0.10
2	2	19	820	160.4	65.9	0.05	0.09
2	3	14	487	118.9	46.2	0.05	0.08
2	4	16	770	121.0	47.3	0.04	0.09
3	1	12	407	81.3	30.8	0.08	0.20
3	2	20	693	117.2	55.6	0.12	0.26
3	3	15	480	80.3	37.1	0.10	0.23
3	4	14	487	78.7	34.2	0.09	0.22
3	5	19	613	89.6	42.3	0.10	0.24
4	1	19	660	66.5	19.8	0.09	0.22
4	2	17	567	52.6	22.5	0.08	0.20
4	3	25	793	78.0	17.9	0.12	0.29
4	4	16	553	67.6	21.9	0.13	0.33
4	5	23	747	67.1	21.9	0.12	0.30

**Table 21 : 1997 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dying trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	3	620	150.9	89.1	0.06	0.12
1	4	1	600	174.4	93.5	0.04	0.09
2	1	0	587				
2	2	0	820				
2	3	0	487				
2	4	0	770				
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	1	660	46.7	29.7	0.08	0.22
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

**Table 22 : 1997 Conditions in lodgepole pine study plots: Optimum stocking in stands with topkill.
For dead trees only.**

Block	Plot	# trees measured	Density trees/acre	Total BA ft2/acre	Sapwood BA ft2/acre	5 year radial growth (in)	10 year radial growth (in)
1	1	0	347				
1	2	0	367				
1	3	0	620				
1	4	4	600	163.1		0.055	0.13
2	1	0	587				
2	2	2	820	182.8		0.0325	0.07
2	3	0	487				0.17
2	4	1	770	156.3		0.065	0.09
3	1	0	407				
3	2	0	693				
3	3	0	480				
3	4	0	487				
3	5	0	613				
4	1	1	660	79.5		0.155	0.41
4	2	0	567				
4	3	0	793				
4	4	0	553				
4	5	0	747				

Table 23 : Percent change in sapwood basal area for sampled girdled and non-girdled lodgepole pine, 1991-1997.

Treatment	Block	Plot	[-----% change in sapwood BA compared to 1991 statistic-----]									
			1992		1993		1994		1995		1997	
			girdled	non-	girdled	non-	girdled	non-	girdled	non-	girdled	non-
1	1	1		-17.5		-15.9		-9.6		-17.0		1.2
1	2	3		-16.6		-4.6		11.6		31.6		-7.7
1	3	5		-31.6		-2.0		-14.4		-16.2		-7.3
1	4	5		-21.6		-24.7		48.2				-22.5
2	3	1	-33.2	42.8		-21.3	-66.3	-16.8	-25.1	-50.1	7.0	-42.6
2	4	4	-41.4	-6.8	9.8	-16.8	-10.1	-2.6			0.5	-41.3
3	1	2	-18.3	-34.8	24.3	34.0	-15.4	6.3	46.9	-4.3	-21.5	-17.2
3	2	1	-14.3	-19.7	5.3	27.4	31.1	4.1	37.7	28.9	-21.0	-17.3
3	3	3	42.5	-5.2	-1.5	-21.0	-17.1	-7.5	-44.1	-17.7	-53.4	-1.5
3	4	2	-7.0	-11.9	-1.1	8.8	-11.3	-25.9			-25.9	-46.6
4	1	3	-50.8	-7.5	-55.3	-4.6	0.3	14.4	-23.6	-10.9	-20.1	1.8
4	2	4		-19.4	28.6	11.4	-12.7	3.9	33.4	-4.8		-22.9
4	3	4	14.5	-16.3	44.6	-7.3	-45.4	26.6	-44.5	-41.5	-16.6	-39.3
4	4	3	-2.9	-11.8	-51.9	2.1	-14.2	-7.0			-18.2	-58.9
5	1	4	-11.2	-9.3	-0.7	10.0	5.2	-2.0	16.7	13.1	-0.8	14.9
5	2	2	-5.9	16.5	-10.0	0.2	30.2	5.8	85.2	45.2	-37.4	-0.2
5	3	2	-13.0	-5.5	29.6	21.3	-21.8	-10.5	-39.2	-45.3	-44.2	-22.9
5	4	1	19.5	2.9	-2.8	10.3	-15.7	-22.7			-46.7	-48.8

Table 24 : Total sapwood basal area and change in sapwood basal area for girdled and non-girdled lodgepole pine 1991-1997.

Treatment Block Plot			Sapwood Basal Area (square feet)													
			1991		1992		1993		1994		1995		1997			
			Total	Total	Change vs. 1991		Total	Change vs. 1991		Total	Change vs. 1991		Total	Change vs. 1991		Total

```
title'Listing of Ident (1990) + Observed (1991-97)';
options ls=80 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
proc print;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc print;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
proc print;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CR
NTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
drop stat92x;
proc print;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CR
NTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
drop stat93x;
proc print;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
proc print;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
proc print;
```

Combined Data set 90-97


```

1                               The SAS System

      08:11 Thursday, October 15, 1998

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.12 TS045
      Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

```

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH, IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas

```
NOTE: SAS initialization used:
      real time      4.09 seconds
      cpu time       0.15 seconds
```

NOTE: DM statements are only valid in DMS mode.
NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```

1 title'Listing of Ident (1990) + Observed (1991-97)';
2 options ls=80 ps=55;
3 data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
4 input block plot tag east north crown dbh90 rank grd_tree girdle;
5 if block=1 and plot=1 then treat=1;
6 if block=1 and plot=2 then treat=3;
7 if block=1 and plot=3 then treat=4;
8 if block=1 and plot=4 then treat=5;
9 if block=2 and plot=1 then treat=3;
10 if block=2 and plot=2 then treat=5;
11 if block=2 and plot=3 then treat=1;
12 if block=2 and plot=4 then treat=4;
13 if block=3 and plot=1 then treat=2;
14 if block=3 and plot=2 then treat=5;
15 if block=3 and plot=3 then treat=3;
16 if block=3 and plot=4 then treat=4;
17 if block=3 and plot=5 then treat=1;
18 if block=4 and plot=1 then treat=5;
19 if block=4 and plot=2 then treat=3;
20 if block=4 and plot=3 then treat=4;
21 if block=4 and plot=4 then treat=2;
22 if block=4 and plot=5 then treat=1;

```

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NOTE: The infile '90.dat' is:
File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.
The minimum record length was 20.
The maximum record length was 27.

NOTE: The data set WORK.T90 has 1841 observations and 11 variables.

```
NOTE: DATA statement used:
      real time      1.96 seconds
      cpu time       0.25 seconds
```

```
23      proc print;
```

NOTE: The PROCEDURE PRINT printed pages 1-37.

```
NOTE: PROCEDURE PRINT used:
      real time      0.61 seconds
      cpu time       0.34 seconds
```

```
24      proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1841 observations and 11 variables.

```
NOTE: PROCEDURE SORT used:
      real time      0.46 seconds
      cpu time       0.09 seconds
```

```
25      data t91; infile '91.dat' firstobs=2 delimiter=',' missover;
26      input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591
STMLN91 CRNHT91 CRNWD91;
27      CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:
File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.
The minimum record length was 41.
The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

```
NOTE: DATA statement used:
      real time      0.46 seconds
      cpu time       0.15 seconds
```

```
28      proc print;
```

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NOTE: The PROCEDURE PRINT printed pages 38-68.

NOTE: PROCEDURE PRINT used:

real time	0.66 seconds
cpu time	0.43 seconds

29 proc sort; by block plot tag;

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.26 seconds
cpu time	0.06 seconds

30 data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
31 input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592
STMLN92 CRNHT92 CRNTP92;

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.24 seconds
cpu time	0.05 seconds

32 proc print;

NOTE: The PROCEDURE PRINT printed pages 69-76.

NOTE: PROCEDURE PRINT used:

real time	0.15 seconds
cpu time	0.12 seconds

33 proc sort; by block plot tag;

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.16 seconds
cpu time	0.02 seconds

34 data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
35 input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093

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RAD0593 STMLN93 CRNHT93 CRNTP93;

36 sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20;

hrt93=hrt93/20;

37 drop stat92x;

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time	0.22 seconds
cpu time	0.05 seconds

38 proc print;

NOTE: The PROCEDURE PRINT printed pages 77-84.

NOTE: PROCEDURE PRINT used:

real time	0.11 seconds
cpu time	0.11 seconds

39 proc sort; by block plot tag;

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.13 seconds
cpu time	0.04 seconds

40 data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
41 input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094
RAD0594 STMLN94 CRNHT94 CRNTP94;
42 sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20;
hrt94=hrt94/20;
43 drop stat93x;

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

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NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).
3 at 42:12 3 at 42:32 3 at 42:51 3 at 42:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time 0.22 seconds
cpu time 0.07 seconds

44 proc print;

NOTE: The PROCEDURE PRINT printed pages 85-91.

NOTE: PROCEDURE PRINT used:

real time 0.10 seconds
cpu time 0.10 seconds

45 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds
cpu time 0.03 seconds

46 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
47 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095
STMLN95 CRNHT95 CRNTP95;
48 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20;
hrt95=hrt95/20;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.
The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.17 seconds
cpu time 0.04 seconds

49 proc print;

NOTE: The PROCEDURE PRINT printed pages 92-96.

NOTE: PROCEDURE PRINT used:

real time 0.11 seconds

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cpu time 0.08 seconds

50 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.12 seconds
cpu time 0.03 seconds

51 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
52 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097
STMLN97 CRNTP97 CRNHT97;
53 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20;
hrt97=hrt97/20;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.
The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).
8 at 53:12 11 at 53:32 10 at 53:51 8 at 53:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time 0.17 seconds
cpu time 0.07 seconds

54 proc print;

NOTE: The PROCEDURE PRINT printed pages 97-103.

NOTE: PROCEDURE PRINT used:

real time 0.10 seconds
cpu time 0.10 seconds

NOTE: The SAS System used:

real time 11.33 seconds
cpu time 2.44 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1	1	1	1	98	59	2	6.9	2	0	.	1
2	1	1	2	95	57	2	7.0	2	0	.	1
3	1	1	3	84	54	2	5.9	2	0	.	1
4	1	1	4	92	60	2	6.4	2	0	.	1
5	1	1	5	.	.	2	7.0	3	2	.	1
6	1	1	6	.	.	3	5.2	4	2	.	1
7	1	1	7	.	.	3	4.5	4	2	.	1
8	1	1	8	77	58	2	7.5	2	0	.	1
9	1	1	9	74	62	2	7.4	2	0	.	1
10	1	1	10	68	56	2	6.6	2	0	.	1
11	1	1	11	64	50	2	8.4	1	0	.	1
12	1	1	12	.	.	2	5.6	3	2	.	1
13	1	1	13	.	.	2	5.6	3	2	.	1
14	1	1	14	54	60	2	6.5	2	0	.	1
15	1	1	15	.	.	3	4.0	4	2	.	1
16	1	1	16	.	.	2	7.9	3	2	.	1
17	1	1	17	41	53	2	7.4	2	0	.	1
18	1	1	18	40	43	2	6.9	2	0	.	1
19	1	1	19	32	51	2	8.5	2	0	.	1
20	1	1	20	.	.	2	5.4	3	2	.	1
21	1	1	21	20	65	2	6.4	2	0	.	1
22	1	1	22	14	60	2	9.4	2	0	.	1
23	1	1	23	12	49	2	5.9	2	0	.	1
24	1	1	24	6	44	2	8.4	2	0	.	1
25	1	1	25	2	49	2	9.2	1	0	.	1
26	1	1	26	91	36	2	7.4	2	0	.	1
27	1	1	27	90	31	2	8.4	2	0	.	1
28	1	1	28	.	.	3	2.9	4	2	.	1
29	1	1	29	84	23	2	8.0	2	0	.	1
30	1	1	30	81	31	2	5.4	2	0	.	1
31	1	1	31	.	.	3	4.0	3	2	.	1
32	1	1	32	85	41	2	7.5	2	0	.	1
33	1	1	33	78	41	2	7.0	2	0	.	1
34	1	1	34	75	25	2	6.4	2	0	.	1
35	1	1	35	68	24	2	7.0	2	0	.	1
36	1	1	36	.	.	3	3.4	3	2	.	1
37	1	1	37	.	.	2	8.1	4	2	.	1
38	1	1	38	55	36	2	5.7	2	0	.	1
39	1	1	39	48	27	2	6.8	2	0	.	1
40	1	1	40	49	34	2	6.4	2	0	.	1
41	1	1	41	40	34	2	6.5	2	0	.	1
42	1	1	42	39	27	2	6.8	2	0	.	1
43	1	1	43	30	38	2	7.4	2	0	.	1
44	1	1	44	29	29	2	6.4	2	0	.	1
45	1	1	45	24	24	2	6.6	2	0	.	1
46	1	1	46	21	38	2	7.2	2	0	.	1
47	1	1	47	23	47	2	7.5	2	0	.	1
48	1	1	48	11	30	2	7.0	2	0	.	1
49	1	1	49	.	.	2	7.8	3	2	.	1
50	1	1	50	1	32	2	7.5	2	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
51	1	1	51	.	.	2	6.5	3	2	.	1
52	1	1	52	65	12	2	7.3	2	0	.	-1
53	1	1	53	.	.	2	5.5	3	2	.	1
54	1	1	54	56	17	2	5.7	2	0	.	1
55	1	1	55	54	24	2	5.9	2	0	.	1
56	1	1	56	.	.	2	6.9	3	2	.	1
57	1	1	57	51	11	2	6.5	2	0	.	1
58	1	1	58	50	2	2	8.0	3	0	.	1
59	1	1	59	39	3	2	8.8	3	0	.	1
60	1	1	60	37	14	2	7.5	2	0	.	1
61	1	1	61	31	16	2	7.4	2	0	.	1
62	1	1	62	29	1	2	7.2	2	0	.	1
63	1	1	63	.	.	2	7.7	3	2	.	1
64	1	1	64	21	11	2	7.6	2	0	.	1
65	1	1	65	23	18	2	5.4	2	0	.	1
66	1	1	66	19	25	2	6.9	3	0	.	1
67	1	1	67	15	18	2	9.0	3	0	.	1
68	1	1	68	.	.	2	5.9	3	2	.	1
69	1	1	69	.	.	2	4.7	3	2	.	1
70	1	1	70	8	10	2	7.1	3	0	.	1
71	1	1	71	.	.	2	6.5	3	2	.	1
72	1	1	72	1	11	2	7.1	2	0	.	1
73	1	2	73	66	3	2	9.0	2	1	25	3
74	1	2	74	.	.	2	5.8	2	2	.	3
75	1	2	75	45	0	2	7.7	2	0	.	3
76	1	2	76	44	8	2	7.6	2	0	.	3
77	1	2	77	53	9	2	7.9	2	0	.	3
78	1	2	78	.	.	2	4.6	2	2	.	3
79	1	2	79	48	14	2	7.2	2	0	.	3
80	1	2	80	60	17	2	7.1	2	0	.	3
81	1	2	81	.	.	2	6.9	2	2	.	3
82	1	2	82	59	23	2	8.5	2	0	.	3
83	1	2	83	46	24	2	7.5	2	0	.	3
84	1	2	84	54	28	2	7.0	2	0	.	3
85	1	2	85	.	.	2	6.2	2	2	.	3
86	1	2	86	65	34	2	6.5	2	1	23	3
87	1	2	87	63	43	2	6.8	2	0	.	3
88	1	2	88	.	.	2	4.6	2	2	.	3
89	1	2	89	42	36	2	6.4	2	0	.	3
90	1	2	90	42	45	2	6.5	2	0	.	3
91	1	2	91	.	.	2	6.3	2	2	.	3
92	1	2	92	55	49	2	7.5	2	0	.	3
93	1	2	93	.	.	3	5.7	4	2	.	3
94	1	2	94	63	62	2	6.5	2	1	25	3
95	1	2	95	58	62	2	7.2	2	0	.	3
96	1	2	96	51	61	2	6.9	2	0	.	3
97	1	2	97	.	.	2	4.9	2	2	.	3
98	1	2	98	43	63	2	6.1	2	1	19	3
99	1	2	99	41	68	2	8.0	2	1	25	3
100	1	2	100	.	.	2	4.8	2	2	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
101	1	2	101	40	80	2	7.1	2	0	.	3
102	1	2	102	55	77	2	7.1	2	0	.	3
103	1	2	103	.	.	2	5.7	2	2	.	3
104	1	2	104	56	87	2	6.2	2	1	20	3
105	1	2	105	.	.	3	6.2	4	2	.	3
106	1	2	106	45	86	2	6.4	2	1	25	3
107	1	2	107	38	84	2	7.2	2	1	29	3
108	1	2	108	.	.	2	6.5	2	2	.	3
109	1	2	109	.	.	2	5.5	2	2	.	3
110	1	2	110	46	97	2	8.0	2	1	24	3
111	1	2	111	.	.	2	4.8	3	2	.	3
112	1	2	112	57	93	2	8.0	2	1	29	3
113	1	2	113	37	5	2	6.1	2	1	25	3
114	1	2	114	.	.	2	5.1	2	2	.	3
115	1	2	115	25	5	2	7.4	2	1	27	3
116	1	2	116	34	14	2	7.3	2	1	22	3
117	1	2	117	27	13	2	8.6	1	1	30	3
118	1	2	118	22	19	2	6.3	2	0	.	3
119	1	2	119	.	.	2	6.0	2	2	.	3
120	1	2	120	34	29	2	7.6	1	0	.	3
121	1	2	121	26	37	2	6.9	2	1	20	3
122	1	2	122	.	.	3	5.2	2	2	.	3
123	1	2	123	.	.	3	5.3	4	2	.	3
124	1	2	124	41	53	2	7.4	1	1	21	3
125	1	2	125	.	.	2	6.1	3	2	.	3
126	1	2	126	29	61	2	6.4	2	0	.	3
127	1	2	127	.	.	3	3.2	3	2	.	3
128	1	2	128	30	72	2	6.4	2	1	21	3
129	1	2	129	.	.	3	4.3	3	2	.	3
130	1	2	130	.	.	2	5.5	3	2	.	3
131	1	2	131	17	79	2	6.4	2	0	.	3
132	1	2	132	.	.	2	5.7	2	2	.	3
133	1	2	133	22	87	2	8.1	1	0	.	3
134	1	2	134	.	.	2	5.5	2	2	.	3
135	1	2	135	18	98	2	6.6	2	0	.	3
136	1	2	136	11	5	2	6.3	2	0	.	3
137	1	2	137	15	11	2	7.5	2	0	.	3
138	1	2	138	.	.	2	5.2	2	2	.	3
139	1	2	139	.	.	2	5.7	2	2	.	3
140	1	2	140	14	25	2	5.9	2	0	.	3
141	1	2	141	13	30	2	7.0	2	1	20	3
142	1	2	142	.	.	3	4.1	2	2	.	3
143	1	2	143	1	40	2	6.3	2	1	20	3
144	1	2	144	.	.	2	6.4	3	2	.	3
145	1	2	145	15	37	2	7.4	2	1	24	3
146	1	2	146	.	.	2	6.5	3	2	.	3
147	1	2	147	17	51	2	6.7	2	0	.	3
148	1	2	148	12	47	2	8.0	1	1	32	3
149	1	2	149	.	.	3	3.6	3	2	.	3
150	1	2	150	8	51	2	7.2	2	1	23	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
151	1	2	151	.	.	3	4.3	3	2	.	3
152	1	2	152	12	64	2	6.9	2	0	.	3
153	1	2	153	.	.	3	3.8	4	2	.	3
154	1	2	154	3	72	2	6.5	2	0	.	3
155	1	2	155	16	67	2	7.9	1	0	.	3
156	1	2	156	.	.	2	6.3	2	2	.	3
157	1	2	157	10	75	2	6.7	2	0	.	3
158	1	2	158	5	34	2	6.8	2	0	.	3
159	1	2	159	11	87	2	6.4	2	0	.	3
160	1	2	160	.	.	2	5.4	2	2	.	3
161	1	2	161	3	90	2	6.7	2	0	.	3
162	1	2	162	.	.	2	5.1	2	2	.	3
163	1	3	163	62	6	2	6.4	1	0	.	4
164	1	3	164	52	1	2	7.0	1	0	.	4
165	1	3	165	.	.	3	4.1	4	2	.	4
166	1	3	166	.	.	2	6.8	4	2	.	4
167	1	3	167	40	15	2	7.6	1	1	25	4
168	1	3	168	47	13	2	4.7	2	0	.	4
169	1	3	169	53	8	2	5.3	2	0	.	4
170	1	3	170	57	14	2	6.3	1	0	.	4
171	1	3	171	59	17	2	5.0	2	0	.	4
172	1	3	172	48	18	2	6.5	1	0	.	4
173	1	3	173	43	22	2	5.5	1	0	.	4
174	1	3	174	50	26	2	6.1	1	0	.	4
175	1	3	175	55	25	2	4.1	2	0	.	4
176	1	3	176	65	21	2	5.1	2	0	.	4
177	1	3	177	64	30	2	5.4	2	0	.	4
178	1	3	178	59	28	2	5.0	2	0	.	4
179	1	3	179	.	.	2	6.1	2	2	.	4
180	1	3	180	47	31	2	6.6	1	0	.	4
181	1	3	181	41	29	3	5.4	2	0	.	4
182	1	3	182	42	37	2	6.5	1	0	.	4
183	1	3	183	.	.	3	2.6	4	2	.	4
184	1	3	184	54	42	2	5.7	2	0	.	4
185	1	3	185	61	39	2	6.4	1	0	.	4
186	1	3	186	62	45	2	6.5	1	1	23	4
187	1	3	187	55	50	3	5.9	1	0	.	4
188	1	3	188	44	48	2	5.8	2	0	.	4
189	1	3	189	43	54	2	7.1	1	1	26	4
190	1	3	190	.	.	3	2.8	4	2	.	4
191	1	3	191	.	.	3	3.8	3	2	.	4
192	1	3	192	40	59	2	6.0	2	0	.	4
193	1	3	193	45	62	3	4.0	2	0	.	4
194	1	3	194	53	61	2	6.4	1	0	.	4
195	1	3	195	60	57	3	4.1	2	0	.	4
196	1	3	196	62	62	2	8.6	1	1	23	4
197	1	3	197	30	3	2	9.0	1	0	.	4
198	1	3	198	16	10	2	8.1	1	0	.	4
199	1	3	199	3	7	2	6.5	2	0	.	4
200	1	3	200	.	.	2	5.5	2	2	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
201	1	3	201	15	16	2	7.2	1	0	.	4
202	1	3	202	25	16	2	7.4	1	0	.	4
203	1	3	203	33	15	2	6.0	2	0	.	4
204	1	3	204	.	.	2	3.9	1	2	.	4
205	1	3	205	31	23	2	6.8	1	1	25	4
206	1	3	206	.	.	3	4.2	3	2	.	4
207	1	3	207	.	.	2	6.0	3	2	.	4
208	1	3	208	12	23	2	6.3	2	0	.	4
209	1	3	209	5	22	2	5.9	2	0	.	4
210	1	3	210	9	26	2	6.3	1	1	26	4
211	1	3	211	4	32	2	6.9	2	0	.	4
212	1	3	212	22	29	2	6.4	1	0	.	4
213	1	3	213	.	.	2	6.5	4	2	.	4
214	1	3	214	34	32	2	7.5	2	0	.	4
215	1	3	215	31	39	2	5.3	2	0	.	4
216	1	3	216	23	42	2	5.3	2	0	.	4
217	1	3	217	18	36	2	6.2	2	0	.	4
218	1	3	218	11	41	2	7.3	1	1	25	4
219	1	3	219	3	37	3	4.0	3	0	.	4
220	1	3	220	2	41	2	5.7	2	0	.	4
221	1	3	221	7	44	2	6.4	2	0	.	4
222	1	3	222	13	48	2	5.9	2	0	.	4
223	1	3	223	24	48	2	5.4	2	0	.	4
224	1	3	224	33	46	2	5.1	2	0	.	4
225	1	3	225	41	45	2	6.8	2	0	.	4
226	1	3	226	38	53	2	6.3	2	0	.	4
227	1	3	227	33	52	2	6.9	2	0	.	4
228	1	3	228	28	58	2	5.4	2	0	.	4
229	1	3	229	25	61	2	6.6	2	0	.	4
230	1	3	230	24	53	2	7.3	1	0	.	4
231	1	3	231	15	62	3	4.0	2	0	.	4
232	1	3	232	8	60	3	6.5	2	0	.	4
233	1	3	233	7	52	2	5.2	2	0	.	4
234	1	3	234	1	52	2	6.3	1	0	.	4
235	1	3	235	5	52	2	7.1	1	0	.	4
236	1	4	236	7	5	2	7.7	1	0	.	5
237	1	4	237	15	8	2	6.5	2	1	23	5
238	1	4	238	5	12	2	7.8	2	0	.	5
239	1	4	239	7	20	2	6.2	2	0	.	5
240	1	4	240	17	22	2	7.3	3	0	.	5
241	1	4	241	10	25	2	7.5	1	0	.	5
242	1	4	242	3	29	2	7.8	1	1	27	5
243	1	4	243	2	35	2	6.5	4	1	27	5
244	1	4	244	6	41	2	6.9	2	0	.	5
245	1	4	245	12	37	2	6.9	2	0	.	5
246	1	4	246	19	31	2	6.8	2	1	32	5
247	1	4	247	22	45	2	6.4	3	1	28	5
248	1	4	248	18	41	2	7.6	2	1	30	5
249	1	4	249	12	43	2	6.9	2	1	28	5
250	1	4	250	10	49	2	6.0	2	1	24	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
251	1	4	251	7	57	2	7.3	2	0	.	5
252	1	4	252	14	54	2	5.9	4	1	23	5
253	1	4	253	24	51	2	7.8	1	0	.	5
254	1	4	254	29	62	2	7.1	4	0	.	5
255	1	4	255	23	59	2	6.4	3	1	25	5
256	1	4	256	18	63	2	6.4	4	1	30	5
257	1	4	257	9	62	2	6.6	3	0	.	5
258	1	4	258	7	68	3	4.7	4	0	.	5
259	1	4	259	11	69	2	5.0	3	0	.	5
260	1	4	260	21	70	2	5.5	2	1	26	5
261	1	4	261	28	69	2	7.7	1	1	31	5
262	1	4	262	25	77	2	5.8	1	0	.	5
263	1	4	263	18	75	2	5.8	3	0	.	5
264	1	4	264	9	75	2	8.0	1	1	27	5
265	1	4	265	4	84	2	5.8	1	0	.	5
266	1	4	266	13	83	2	6.7	1	1	25	5
267	1	4	267	16	87	2	7.4	1	0	.	5
268	1	4	268	24	94	2	5.2	2	1	23	5
269	1	4	269	9	90	2	6.2	3	0	.	5
270	1	4	270	7	96	2	5.9	2	1	23	5
271	1	4	271	4	91	2	6.1	2	0	.	5
272	1	4	272	1	99	3	3.7	3	1	20	5
273	1	4	273	19	1	2	8.2	3	0	.	5
274	1	4	274	25	1	2	6.7	3	0	.	5
275	1	4	275	32	11	2	7.6	1	1	28	5
276	1	4	276	23	16	2	7.8	2	1	24	5
277	1	4	277	34	19	2	6.8	2	0	.	5
278	1	4	278	31	25	2	7.4	1	1	27	5
279	1	4	279	26	29	2	9.2	1	1	25	5
280	1	4	280	27	39	2	6.3	2	1	27	5
281	1	4	281	38	39	2	8.7	1	0	.	5
282	1	4	282	38	46	2	7.3	3	0	.	5
283	1	4	283	31	49	3	4.4	2	0	.	5
284	1	4	284	38	55	2	8.7	2	0	.	5
285	1	4	285	43	50	2	5.5	4	1	25	5
286	1	4	286	35	65	2	7.3	2	1	26	5
287	1	4	287	40	69	2	6.0	3	0	.	5
288	1	4	288	40	84	2	6.1	3	0	.	5
289	1	4	289	34	82	2	6.5	2	0	.	5
290	1	4	290	28	84	2	7.8	1	1	28	5
291	1	4	291	30	88	2	7.3	2	0	.	5
292	1	4	292	37	93	2	7.7	4	0	.	5
293	1	4	293	33	98	2	6.8	2	0	.	5
294	1	4	294	28	97	2	7.4	2	0	.	5
295	1	4	295	46	3	2	7.4	1	1	29	5
296	1	4	296	54	1	3	4.0	2	0	.	5
297	1	4	297	61	11	2	8.7	1	1	29	5
298	1	4	298	54	14	2	8.3	2	0	.	5
299	1	4	299	43	10	2	5.6	3	0	.	5
300	1	4	300	.	.	3	5.6	5	2	.	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
301	1	4	301	46	19	2	8.5	1	0	.	5
302	1	4	302	65	22	2	6.6	2	1	24	5
303	1	4	303	61	34	2	6.3	2	0	.	5
304	1	4	304	54	29	2	5.7	3	0	.	5
305	1	4	305	49	24	2	6.9	2	0	.	5
306	1	4	306	43	32	2	7.2	4	0	.	5
307	1	4	307	48	39	2	6.4	2	1	25	5
308	1	4	308	47	44	2	7.2	2	1	31	5
309	1	4	309	56	44	3	5.6	4	0	.	5
310	1	4	310	58	41	2	7.2	2	0	.	5
311	1	4	311	64	44	2	7.8	2	0	.	5
312	1	4	312	61	49	2	7.0	3	1	28	5
313	1	4	313	53	53	2	6.0	2	0	.	5
314	1	4	314	66	55	2	7.9	1	0	.	5
315	1	4	315	61	57	2	8.2	2	0	.	5
316	1	4	316	55	59	2	8.1	3	0	.	5
317	1	4	317	47	64	2	7.7	1	1	22	5
318	1	4	318	45	74	3	6.7	2	0	.	5
319	1	4	319	60	70	2	7.4	2	1	24	5
320	1	4	320	64	76	2	5.2	3	0	.	5
321	1	4	321	55	76	2	7.2	2	0	.	5
322	1	4	322	58	81	2	8.1	1	1	31	5
323	1	4	323	43	89	2	7.2	3	0	.	5
324	1	4	324	52	90	2	5.9	2	1	24	5
325	1	4	325	62	87	2	7.1	3	0	.	5
326	1	4	326	66	87	2	8.5	3	0	.	5
327	2	1	327	8	64	2	6.1	2	0	.	3
328	2	1	328	14	64	2	8.4	1	1	27	3
329	2	1	329	.	.	3	5.3	4	2	.	3
330	2	1	330	18	60	2	5.2	3	1	21	3
331	2	1	331	.	.	2	5.3	4	2	.	3
332	2	1	332	6	52	2	5.0	3	1	18	3
333	2	1	333	6	48	2	5.1	3	1	19	3
334	2	1	334	13	50	2	6.4	1	1	17	3
335	2	1	335	18	42	2	5.5	1	0	.	3
336	2	1	336	.	.	3	3.3	4	2	.	3
337	2	1	337	.	.	3	2.0	5	2	.	3
338	2	1	338	.	.	3	3.1	4	2	.	3
339	2	1	339	9	43	2	5.1	2	1	20	3
340	2	1	340	.	.	4	2.7	5	2	.	3
341	2	1	341	5	42	2	5.3	2	0	.	3
342	2	1	342	.	.	2	4.2	4	2	.	3
343	2	1	343	0	40	2	6.2	1	0	.	3
344	2	1	344	1	36	3	4.6	3	0	.	3
345	2	1	345	.	.	3	2.1	5	2	.	3
346	2	1	346	.	.	3	3.5	4	2	.	3
347	2	1	347	5	34	2	4.9	3	0	.	3
348	2	1	348	.	.	3	4.1	5	2	.	3
349	2	1	349	8	36	2	6.7	1	0	.	3
350	2	1	350	12	35	3	3.9	3	0	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
351	2	1	351	18	37	2	4.7	3	0	.	3
352	2	1	352	.	.	2	5.8	4	2	.	3
353	2	1	353	8	31	2	5.5	1	1	20	3
354	2	1	354	.	.	3	3.1	4	2	.	3
355	2	1	355	.	.	4	3.0	5	2	.	3
356	2	1	356	4	26	3	3.4	3	0	.	3
357	2	1	357	.	.	3	2.7	4	2	.	3
358	2	1	358	.	.	3	3.2	5	2	.	3
359	2	1	359	4	20	2	4.7	1	0	.	3
360	2	1	360	.	.	3	2.1	5	2	.	3
361	2	1	361	9	18	2	5.7	3	1	18	3
362	2	1	362	.	.	4	2.2	5	2	.	3
363	2	1	363	13	19	2	5.4	1	0	.	3
364	2	1	364	.	.	3	3.7	4	2	.	3
365	2	1	365	11	11	3	3.8	2	0	.	3
366	2	1	366	3	6	2	8.1	1	0	.	3
367	2	1	367	10	4	3	4.9	3	0	.	3
368	2	1	368	.	.	2	6.9	4	2	.	3
369	2	1	369	22	1	3	3.6	3	0	.	3
370	2	1	370	26	5	3	3.8	3	0	.	3
371	2	1	371	30	5	2	6.0	2	1	23	3
372	2	1	372	37	2	2	5.5	3	1	18	3
373	2	1	373	24	55	2	6.5	1	1	20	3
374	2	1	374	27	52	2	4.9	3	0	.	3
375	2	1	375	.	.	3	4.2	5	2	.	3
376	2	1	376	32	57	2	5.5	2	0	.	3
377	2	1	377	36	61	3	4.2	3	0	.	3
378	2	1	378	39	61	2	5.7	1	1	22	3
379	2	1	379	.	.	2	4.8	4	2	.	3
380	2	1	380	.	.	3	3.2	5	2	.	3
381	2	1	381	41	57	2	4.4	3	1	19	3
382	2	1	382	.	.	4	5.3	5	2	.	3
383	2	1	383	33	51	2	6.2	3	0	.	3
384	2	1	384	27	45	2	6.2	1	0	.	3
385	2	1	385	.	.	4	2.5	5	2	.	3
386	2	1	386	21	37	2	3.2	3	1	13	3
387	2	1	387	29	36	2	4.9	2	1	16	3
388	2	1	388	39	45	2	6.7	1	1	21	3
389	2	1	389	.	.	2	5.9	4	2	.	3
390	2	1	390	.	.	4	1.8	4	2	.	3
391	2	1	391	39	36	2	5.7	1	1	22	3
392	2	1	392	20	30	2	4.6	2	1	16	3
393	2	1	393	.	.	4	3.3	5	2	.	3
394	2	1	394	25	26	2	3.9	3	0	.	3
395	2	1	395	.	.	4	2.7	5	2	.	3
396	2	1	396	26	26	2	4.4	2	1	18	3
397	2	1	397	.	.	4	2.9	4	2	.	3
398	2	1	398	33	18	2	4.1	3	0	.	3
399	2	1	399	28	20	3	3.5	3	1	14	3
400	2	1	400	19	18	2	5.4	2	0	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
401	2	1	401	22	11	2	6.2	1	1	20	3
402	2	1	402	.	.	3	2.7	4	2	.	3
403	2	1	403	31	13	2	6.3	1	0	.	3
404	2	1	404	.	.	3	3.6	4	2	.	3
405	2	1	405	.	.	4	2.5	5	2	.	3
406	2	1	406	47	55	2	7.8	3	0	.	3
407	2	1	407	49	51	2	4.8	3	0	.	3
408	2	1	408	52	54	2	6.1	2	0	.	3
409	2	1	409	.	.	3	4.1	4	2	.	3
410	2	1	410	.	.	4	3.1	5	2	.	3
411	2	1	411	56	59	2	8.6	1	1	26	3
412	2	1	412	.	.	2	6.8	4	2	.	3
413	2	1	413	.	.	2	5.1	4	2	.	3
414	2	1	414	64	41	2	6.6	3	0	.	3
415	2	1	415	51	40	2	6.5	1	1	21	3
416	2	1	416	47	39	2	7.6	1	0	.	3
417	2	1	417	.	.	3	3.1	4	2	.	3
418	2	1	418	.	.	4	1.8	5	2	.	3
419	2	1	419	.	.	3	4.7	4	2	.	3
420	2	1	420	52	28	2	7.1	1	1	23	3
421	2	1	421	.	.	3	3.8	5	2	.	3
422	2	1	422	63	29	2	6.0	3	0	.	3
423	2	1	423	.	.	2	5.0	4	2	.	3
424	2	1	424	.	.	3	3.3	4	2	.	3
425	2	1	425	40	24	2	7.4	1	1	23	3
426	2	1	426	.	.	3	3.5	4	2	.	3
427	2	1	427	42	11	2	6.7	1	0	.	3
428	2	1	428	49	11	3	3.8	3	0	.	3
429	2	1	429	55	16	3	4.8	2	0	.	3
430	2	1	430	63	12	2	6.6	1	1	24	3
431	2	1	431	65	8	3	3.8	3	1	16	3
432	2	1	432	.	.	3	2.2	5	2	.	3
433	2	1	433	50	7	2	6.3	3	1	21	3
434	2	1	434	44	5	2	7.0	2	1	25	3
435	2	1	435	54	3	2	8.2	1	0	.	3
436	2	1	436	68	58	2	6.7	1	0	.	3
437	2	1	437	.	.	3	4.9	4	2	.	3
438	2	1	438	.	.	3	2.8	5	2	.	3
439	2	1	439	87	63	2	6.8	1	0	.	3
440	2	1	440	86	56	3	6.5	3	1	16	3
441	2	1	441	.	.	3	3.0	4	2	.	3
442	2	1	442	85	49	2	4.3	3	0	.	3
443	2	1	443	72	37	2	6.6	1	0	.	3
444	2	1	444	75	37	2	5.6	3	1	19	3
445	2	1	445	80	41	2	6.1	1	0	.	3
446	2	1	446	.	.	4	2.5	5	2	.	3
447	2	1	447	91	43	2	7.7	1	0	.	3
448	2	1	448	.	.	2	7.3	4	2	.	3
449	2	1	449	90	35	3	4.9	3	0	.	3
450	2	1	450	84	38	2	5.1	3	0	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
451	2	1	451	.	.	4	1.9	5	2	.	3
452	2	1	452	.	.	3	3.0	5	2	.	3
453	2	1	453	68	27	3	4.3	3	0	.	3
454	2	1	454	75	31	2	6.4	2	1	21	3
455	2	1	455	83	33	2	5.8	3	0	.	3
456	2	1	456	95	29	2	7.8	1	0	.	3
457	2	1	457	88	28	2	7.0	2	0	.	3
458	2	1	458	80	26	3	4.3	3	0	.	3
459	2	1	459	.	.	4	3.2	5	2	.	3
460	2	1	460	.	.	3	3.2	5	2	.	3
461	2	1	461	74	24	2	6.7	1	1	24	3
462	2	1	462	67	22	2	7.1	2	0	.	3
463	2	1	463	.	.	3	3.7	4	2	.	3
464	2	1	464	74	13	3	3.5	3	0	.	3
465	2	1	465	81	17	2	8.3	1	1	26	3
466	2	1	466	.	.	2	5.2	4	2	.	3
467	2	1	467	95	10	3	3.8	2	1	12	3
468	2	1	468	80	9	2	5.2	3	0	.	3
469	2	1	469	.	.	2	5.9	4	2	.	3
470	2	1	470	76	2	2	5.9	1	1	23	3
471	2	1	471	.	.	3	2.6	5	2	.	3
472	2	1	472	.	.	3	2.3	5	2	.	3
473	2	1	473	.	.	2	6.3	4	2	.	3
474	2	1	474	.	.	2	6.1	4	2	.	3
475	2	2	475	6	63	2	4.7	2	0	.	5
476	2	2	476	8	61	2	5.3	3	0	.	5
477	2	2	477	9	64	2	4.4	3	0	.	5
478	2	2	478	13	62	2	5.9	2	1	21	5
479	2	2	479	16	60	2	4.1	4	1	18	5
480	2	2	480	21	57	2	7.8	3	0	.	5
481	2	2	481	15	54	2	5.5	2	0	.	5
482	2	2	482	3	56	3	3.7	3	0	.	5
483	2	2	483	3	48	2	6.6	1	0	.	5
484	2	2	484	1	39	2	6.0	2	0	.	5
485	2	2	485	.	.	3	1.8	5	2	.	5
486	2	2	486	11	35	2	5.3	4	0	.	5
487	2	2	487	14	36	2	6.6	1	1	24	5
488	2	2	488	10	27	3	3.9	2	1	16	5
489	2	2	489	6	22	2	6.7	1	0	.	5
490	2	2	490	3	33	2	6.5	1	0	.	5
491	2	2	491	1	23	2	6.0	1	0	.	5
492	2	2	492	10	19	3	2.9	4	0	.	5
493	2	2	493	4	14	2	6.4	1	0	.	5
494	2	2	494	16	15	2	6.4	1	0	.	5
495	2	2	495	2	8	2	6.0	2	1	26	5
496	2	2	496	7	8	2	6.4	1	1	.	5
497	2	2	497	13	3	3	4.4	3	0	.	5
498	2	2	498	14	8	2	5.5	3	0	.	5
499	2	2	499	.	.	4	2.6	5	2	.	5
500	2	2	500	23	61	2	4.2	2	1	19	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
501	2	2	501	25	58	2	5.3	3	0	.	5
502	2	2	502	.	.	4	3.2	5	2	.	5
503	2	2	503	28	55	2	5.3	4	0	.	5
504	2	2	504	30	54	2	6.0	1	1	27	5
505	2	2	505	.	.	4	3.3	5	2	.	5
506	2	2	506	31	55	2	5.5	3	0	.	5
507	2	2	507	35	55	2	4.3	3	1	18	5
508	2	2	508	.	.	4	2.6	5	2	.	5
509	2	2	509	37	62	2	5.5	2	0	.	5
510	2	2	510	39	61	2	5.4	4	1	23	5
511	2	2	511	44	62	2	6.3	1	0	.	5
512	2	2	512	38	50	2	6.4	4	0	.	5
513	2	2	513	36	42	2	5.8	2	1	23	5
514	2	2	514	35	42	3	5.0	4	1	17	5
515	2	2	515	30	45	2	4.9	2	0	.	5
516	2	2	516	26	40	3	3.1	4	0	.	5
517	2	2	517	.	.	4	3.7	5	2	.	5
518	2	2	518	23	35	2	7.5	2	1	20	5
519	2	2	519	25	32	2	5.0	3	1	21	5
520	2	2	520	20	32	2	7.5	1	1	28	5
521	2	2	521	21	25	2	5.7	4	0	.	5
522	2	2	522	27	27	2	5.9	3	0	.	5
523	2	2	523	27	26	3	5.0	4	1	18	5
524	2	2	524	35	23	2	6.3	3	0	.	5
525	2	2	525	20	21	2	6.6	2	0	.	5
526	2	2	526	23	18	2	7.4	2	0	.	5
527	2	2	527	.	.	4	5.3	5	2	.	5
528	2	2	528	21	11	2	6.5	1	0	.	5
529	2	2	529	27	7	3	2.9	4	1	12	5
530	2	2	530	25	0	2	6.4	1	0	.	5
531	2	2	531	30	1	3	3.1	4	1	16	5
532	2	2	532	32	4	2	6.8	1	0	.	5
533	2	2	533	36	8	2	5.6	3	1	22	5
534	2	2	534	50	60	3	4.3	3	1	18	5
535	2	2	535	55	61	3	4.8	4	1	18	5
536	2	2	536	64	61	2	6.5	1	0	.	5
537	2	2	537	65	65	3	4.4	3	1	15	5
538	2	2	538	64	58	2	5.9	1	0	.	5
539	2	2	539	61	47	3	4.9	3	0	.	5
540	2	2	540	54	46	3	4.9	4	1	18	5
541	2	2	541	53	45	2	6.3	2	0	.	5
542	2	2	542	50	50	3	4.2	3	1	18	5
543	2	2	543	46	48	2	5.4	2	0	.	5
544	2	2	544	46	42	2	6.8	2	1	25	5
545	2	2	545	49	38	2	5.5	3	1	19	5
546	2	2	546	57	40	2	5.7	2	1	24	5
547	2	2	547	62	35	2	5.8	3	0	.	5
548	2	2	548	.	.	4	3.2	5	2	.	5
549	2	2	549	58	31	2	5.8	3	0	.	5
550	2	2	550	.	.	3	2.5	5	2	.	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
551	2	2	551	.	.	4	3.8	5	2	.	5
552	2	2	552	53	34	2	5.6	2	0	.	5
553	2	2	553	.	.	4	4.0	5	2	.	5
554	2	2	554	.	.	4	2.5	5	2	.	5
555	2	2	555	44	34	2	6.0	2	0	.	5
556	2	2	556	.	.	4	4.4	5	2	.	5
557	2	2	557	42	31	3	3.2	4	0	.	5
558	2	2	558	43	31	3	3.5	4	0	.	5
559	2	2	559	42	27	2	8.2	1	1	29	5
560	2	2	560	.	.	4	3.7	5	2	.	5
561	2	2	561	46	28	3	5.1	4	0	.	5
562	2	2	562	.	.	4	2.8	5	2	.	5
563	2	2	563	50	26	3	5.2	3	0	.	5
564	2	2	564	56	19	2	6.5	4	0	.	5
565	2	2	565	59	23	2	3.0	4	0	.	5
566	2	2	566	43	16	2	6.4	1	1	23	5
567	2	2	567	50	9	2	6.0	1	1	21	5
568	2	2	568	53	9	2	5.9	4	1	23	5
569	2	2	569	57	9	2	7.0	1	0	.	5
570	2	2	570	51	9	2	6.1	4	0	.	5
571	2	2	571	.	.	4	3.1	5	2	.	5
572	2	2	572	43	7	2	5.3	3	0	.	5
573	2	2	573	38	2	2	4.7	3	0	.	5
574	2	2	574	39	2	2	3.7	4	0	.	5
575	2	2	575	50	4	2	5.5	3	0	.	5
576	2	2	576	.	.	3	2.0	5	2	.	5
577	2	2	577	58	1	3	4.0	4	0	.	5
578	2	2	578	60	4	2	5.1	3	1	18	5
579	2	2	579	63	0	2	7.0	1	0	.	5
580	2	2	580	73	58	2	5.6	3	1	16	5
581	2	2	581	81	58	3	3.9	3	0	.	5
582	2	2	582	91	65	3	3.5	3	0	.	5
583	2	2	583	93	56	2	5.4	1	0	.	5
584	2	2	584	94	46	2	5.1	3	0	.	5
585	2	2	585	88	51	2	5.5	3	0	.	5
586	2	2	586	86	45	2	6.2	1	1	22	5
587	2	2	587	76	49	3	4.1	3	1	15	5
588	2	2	588	69	48	2	5.8	1	0	.	5
589	2	2	589	78	37	2	5.9	1	1	21	5
590	2	2	590	.	.	3	3.7	5	2	.	5
591	2	2	591	89	40	2	6.4	1	0	.	5
592	2	2	592	89	37	3	4.2	4	1	15	5
593	2	2	593	81	36	2	5.8	3	1	21	5
594	2	2	594	69	33	2	7.7	1	0	.	5
595	2	2	595	.	.	4	3.2	5	2	.	5
596	2	2	596	83	28	2	7.9	1	1	29	5
597	2	2	597	89	29	2	7.2	3	1	23	5
598	2	2	598	.	.	4	1.9	5	2	.	5
599	2	2	599	87	20	2	6.0	3	0	.	5
600	2	2	600	73	22	2	7.0	1	1	24	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
601	2	2	601	70	24	2	5.6	4	1	21	5
602	2	2	602	67	22	2	6.5	1	1	25	5
603	2	2	603	71	14	2	6.7	4	0	.	5
604	2	2	604	.	.	4	2.8	5	2	.	5
605	2	2	605	70	7	2	5.6	3	0	.	5
606	2	2	606	77	9	2	4.5	3	0	.	5
607	2	2	607	78	10	2	4.7	4	1	19	5
608	2	2	608	79	11	2	5.4	3	0	.	5
609	2	2	609	.	.	4	3.0	5	2	.	5
610	2	2	610	82	10	2	5.5	3	1	21	5
611	2	2	611	.	.	4	4.5	5	2	.	5
612	2	2	612	89	11	2	5.9	3	1	23	5
613	2	2	613	88	9	2	5.8	3	1	21	5
614	2	2	614	92	8	3	4.4	3	0	.	5
615	2	2	615	.	.	3	2.7	5	2	.	5
616	2	2	616	83	5	3	4.5	3	1	18	5
617	2	2	617	76	7	3	3.6	4	0	.	5
618	2	2	618	74	2	3	3.8	3	0	.	5
619	2	2	619	76	3	2	4.6	3	0	.	5
620	2	2	620	.	.	4	3.5	5	2	.	5
621	2	2	621	77	1	2	5.5	1	0	.	5
622	2	2	622	.	.	4	2.5	5	2	.	5
623	2	2	623	98	1	2	5.5	1	1	23	5
624	2	2	624	.	.	4	3.5	5	2	.	5
625	2	3	625	4	56	2	7.5	1	0	1	1
626	2	3	626	13	61	2	7.2	1	0	1	1
627	2	3	627	.	.	3	4.7	3	2	1	1
628	2	3	628	32	62	2	8.0	1	0	1	1
629	2	3	629	.	.	3	2.4	5	2	1	1
630	2	3	630	.	.	3	3.9	5	2	1	1
631	2	3	631	22	54	2	6.6	2	0	1	1
632	2	3	632	12	54	2	6.2	3	0	1	1
633	2	3	633	9	45	2	7.7	3	0	1	1
634	2	3	634	.	.	3	4.5	4	2	1	1
635	2	3	635	15	35	2	7.1	2	0	1	1
636	2	3	636	19	34	2	6.6	1	0	1	1
637	2	3	637	19	38	3	5.8	3	0	1	1
638	2	3	638	25	43	2	6.5	2	0	1	1
639	2	3	639	33	45	2	8.4	1	0	1	1
640	2	3	640	37	44	2	6.7	3	0	1	1
641	2	3	641	33	38	2	6.8	3	0	1	1
642	2	3	642	.	.	3	3.2	4	2	1	1
643	2	3	643	.	.	4	2.2	5	2	1	1
644	2	3	644	.	.	3	4.9	3	2	1	1
645	2	3	645	2	20	2	6.7	1	0	1	1
646	2	3	646	15	14	2	5.0	1	0	1	1
647	2	3	647	21	23	2	5.8	1	0	1	1
648	2	3	648	.	.	4	2.7	5	2	1	1
649	2	3	649	24	15	2	5.4	2	0	1	1
650	2	3	650	30	28	2	7.1	1	0	1	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
651	2	3	651	29	18	2	6.4	3	0	.	1
652	2	3	652	28	8	2	6.0	3	0	.	1
653	2	3	653	20	4	2	5.3	3	0	.	1
654	2	3	654	19	4	2	5.9	3	0	.	1
655	2	3	655	7	7	2	8.6	1	0	.	1
656	2	3	656	15	2	2	6.6	1	0	.	1
657	2	3	657	26	3	2	7.5	2	0	.	1
658	2	3	658	37	63	2	7.0	3	0	.	1
659	2	3	659	47	65	2	6.8	2	0	.	1
660	2	3	660	54	64	2	6.7	1	0	.	1
661	2	3	661	67	66	2	6.4	1	0	.	1
662	2	3	662	72	60	2	6.2	2	0	.	1
663	2	3	663	64	63	2	5.6	3	0	.	1
664	2	3	664	52	63	2	6.3	3	0	.	1
665	2	3	665	.	.	2	6.5	4	2	.	1
666	2	3	666	48	59	2	6.2	2	0	.	1
667	2	3	667	46	40	2	6.0	2	0	.	1
668	2	3	668	50	45	2	5.6	3	0	.	1
669	2	3	669	52	51	2	5.6	2	0	.	1
670	2	3	670	53	44	2	6.4	2	0	.	1
671	2	3	671	60	48	2	5.1	3	0	.	1
672	2	3	672	65	56	2	6.4	1	0	.	1
673	2	3	673	67	41	2	6.5	1	0	.	1
674	2	3	674	64	43	2	7.1	1	0	.	1
675	2	3	675	.	.	4	4.3	5	2	.	1
676	2	3	676	50	38	2	6.7	1	0	.	1
677	2	3	677	.	.	3	3.2	3	2	.	1
678	2	3	678	.	.	4	3.6	5	2	.	1
679	2	3	679	.	.	2	4.6	3	2	.	1
680	2	3	680	41	30	2	6.8	1	0	.	1
681	2	3	681	.	.	4	2.8	5	2	.	1
682	2	3	682	.	.	4	3.3	5	2	.	1
683	2	3	683	.	.	3	3.8	3	2	.	1
684	2	3	684	.	.	4	2.3	5	2	.	1
685	2	3	685	.	.	4	2.8	5	2	.	1
686	2	3	686	57	32	3	4.0	2	0	.	1
687	2	3	687	.	.	3	3.6	3	2	.	1
688	2	3	688	66	32	2	6.4	1	0	.	1
689	2	3	689	.	.	4	1.7	5	2	.	1
690	2	3	690	.	.	4	1.7	5	2	.	1
691	2	3	691	.	.	4	2.1	5	2	.	1
692	2	3	692	.	.	4	3.0	5	2	.	1
693	2	3	693	.	.	3	2.5	3	2	.	1
694	2	3	694	.	.	4	2.6	5	2	.	1
695	2	3	695	.	.	4	2.3	5	2	.	1
696	2	3	696	51	21	2	5.4	1	0	.	1
697	2	3	697	43	23	2	5.7	3	0	.	1
698	2	3	698	.	.	4	2.9	5	2	.	1
699	2	3	699	40	19	2	6.0	3	0	.	1
700	2	3	700	35	14	2	7.7	1	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
701	2	3	701	.	.	4	2.9	5	2	.	1
702	2	3	702	59	15	2	5.6	3	0	.	1
703	2	3	703	67	22	2	6.9	3	0	.	1
704	2	3	704	.	.	3	3.9	3	2	.	1
705	2	3	705	64	14	2	6.5	1	0	.	1
706	2	3	706	54	10	2	6.3	2	0	.	1
707	2	3	707	.	.	2	4.7	3	2	.	1
708	2	3	708	.	.	2	4.7	3	2	.	1
709	2	3	709	.	.	4	1.5	5	2	.	1
710	2	3	710	.	.	2	3.9	3	2	.	1
711	2	3	711	.	.	2	4.6	4	2	.	1
712	2	3	712	62	1	2	5.8	2	0	.	1
713	2	3	713	78	65	2	5.2	2	0	.	1
714	2	3	714	86	66	2	6.3	3	0	.	1
715	2	3	715	91	66	2	6.1	2	0	.	1
716	2	3	716	99	66	2	5.6	1	0	.	1
717	2	3	717	95	63	2	7.0	2	0	.	1
718	2	3	718	84	63	2	5.7	3	0	.	1
719	2	3	719	76	61	2	6.1	3	0	.	1
720	2	3	720	.	.	2	6.8	4	2	.	1
721	2	3	721	84	53	2	7.6	1	0	.	1
722	2	3	722	.	.	2	5.8	4	2	.	1
723	2	3	723	92	53	2	7.8	2	0	.	1
724	2	3	724	86	48	2	8.3	2	0	.	1
725	2	3	725	.	.	2	6.3	4	2	.	1
726	2	3	726	74	37	3	5.2	2	0	.	1
727	2	3	727	82	40	2	5.1	3	0	.	1
728	2	3	728	.	.	3	2.7	3	2	.	1
729	2	3	729	.	.	3	2.8	5	2	.	1
730	2	3	730	89	30	2	8.6	1	0	.	1
731	2	3	731	85	32	2	7.8	3	0	.	1
732	2	3	732	.	.	3	4.1	4	2	.	1
733	2	3	733	78	16	3	5.2	2	0	.	1
734	2	3	734	88	20	2	7.0	2	0	.	1
735	2	3	735	.	.	2	4.4	3	2	.	1
736	2	3	736	.	.	4	4.5	4	2	.	1
737	2	3	737	71	1	2	6.4	2	0	.	1
738	2	3	738	.	.	4	3.4	5	2	.	1
739	2	3	739	85	1	2	7.1	1	0	.	1
740	2	3	740	94	2	4	4.0	2	0	.	1
741	2	4	741	.	.	3	3.4	4	2	.	4
742	2	4	742	14	65	3	3.6	3	0	.	4
743	2	4	743	.	.	3	4.0	4	2	.	4
744	2	4	744	19	56	2	5.6	2	0	.	4
745	2	4	745	20	49	2	5.5	2	0	.	4
746	2	4	746	3	57	3	4.7	3	0	.	4
747	2	4	747	11	47	2	6.3	3	0	.	4
748	2	4	748	2	48	1	7.9	1	1	23	4
749	2	4	749	0	38	3	4.8	3	0	.	4
750	2	4	750	.	.	3	4.2	4	2	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
751	2	4	751	9	37	2	5.8	2	0	.	4
752	2	4	752	.	.	3	3.8	4	2	.	4
753	2	4	753	22	43	3	4.9	2	0	.	4
754	2	4	754	28	40	2	5.2	2	0	.	4
755	2	4	755	.	.	4	2.4	5	2	.	4
756	2	4	756	26	34	2	4.5	3	0	.	4
757	2	4	757	31	36	2	5.9	2	0	.	4
758	2	4	758	29	33	2	4.8	4	0	.	4
759	2	4	759	28	32	2	4.8	2	0	.	4
760	2	4	760	27	31	3	4.6	4	0	.	4
761	2	4	761	21	30	2	5.5	2	0	.	4
762	2	4	762	.	.	4	4.5	5	2	.	4
763	2	4	763	.	.	3	4.3	4	2	.	4
764	2	4	764	.	.	3	4.3	4	2	.	4
765	2	4	765	.	.	3	3.8	4	2	.	4
766	2	4	766	1	22	2	5.1	4	0	.	4
767	2	4	767	3	21	2	5.9	1	0	.	4
768	2	4	768	7	24	3	5.2	4	0	.	4
769	2	4	769	15	23	2	5.1	2	0	.	4
770	2	4	770	28	25	3	4.9	4	0	.	4
771	2	4	771	29	25	2	4.9	2	0	.	4
772	2	4	772	27	16	2	5.7	2	0	.	4
773	2	4	773	25	13	2	6.1	2	0	.	4
774	2	4	774	24	15	3	4.5	4	0	.	4
775	2	4	775	17	15	2	6.1	1	0	.	4
776	2	4	776	10	13	3	4.4	4	0	.	4
777	2	4	777	.	.	3	3.5	4	2	.	4
778	2	4	778	8	16	2	4.2	3	0	.	4
779	2	4	779	7	10	2	6.8	1	1	22	4
780	2	4	780	.	.	3	4.0	4	2	.	4
781	2	4	781	.	.	3	2.8	4	2	.	4
782	2	4	782	.	.	3	3.5	4	2	.	4
783	2	4	783	17	9	3	4.3	3	0	.	4
784	2	4	784	25	6	2	5.7	2	0	.	4
785	2	4	785	.	.	3	4.1	4	2	.	4
786	2	4	786	28	7	3	4.7	4	0	.	4
787	2	4	787	34	66	3	4.5	4	0	.	4
788	2	4	788	.	.	3	4.2	4	2	.	4
789	2	4	789	41	66	2	5.6	3	0	.	4
790	2	4	790	46	59	3	4.9	4	0	.	4
791	2	4	791	41	62	2	6.0	3	0	.	4
792	2	4	792	35	60	2	6.2	1	0	.	4
793	2	4	793	32	57	2	6.5	2	0	.	4
794	2	4	794	45	55	2	4.9	3	0	.	4
795	2	4	795	44	48	2	6.4	2	0	.	4
796	2	4	796	33	43	3	4.6	3	0	.	4
797	2	4	797	35	39	2	5.6	4	0	.	4
798	2	4	798	40	42	3	4.5	4	0	.	4
799	2	4	799	.	.	3	4.0	4	2	.	4
800	2	4	800	50	38	3	3.5	3	0	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
801	2	4	801	40	38	2	4.8	2	0	.	4
802	2	4	802	.	.	3	4.0	4	2	.	4
803	2	4	803	41	29	2	4.2	3	0	.	4
804	2	4	804	.	.	3	2.7	4	2	.	4
805	2	4	805	.	.	4	2.5	5	2	.	4
806	2	4	806	52	27	2	4.4	2	0	.	4
807	2	4	807	.	.	3	4.0	4	2	.	4
808	2	4	808	44	23	2	5.0	2	0	.	4
809	2	4	809	.	.	3	4.0	4	2	.	4
810	2	4	810	41	26	2	4.4	3	0	.	4
811	2	4	811	38	22	2	4.7	3	0	.	4
812	2	4	812	.	.	4	3.2	5	2	.	4
813	2	4	813	.	.	3	4.2	4	2	.	4
814	2	4	814	.	.	3	3.4	4	2	.	4
815	2	4	815	36	11	2	6.0	2	0	.	4
816	2	4	816	39	12	3	4.5	4	0	.	4
817	2	4	817	.	.	3	4.2	4	2	.	4
818	2	4	818	42	10	2	5.4	4	0	.	4
819	2	4	819	44	11	2	6.3	2	0	.	4
820	2	4	820	.	.	3	3.8	4	2	.	4
821	2	4	821	43	1	2	6.4	1	0	.	4
822	2	4	822	51	66	2	6.8	4	0	.	4
823	2	4	823	.	.	4	2.7	5	2	.	4
824	2	4	824	66	63	3	5.2	3	0	.	4
825	2	4	825	58	63	3	4.4	4	0	.	4
826	2	4	826	57	62	2	5.5	3	0	.	4
827	2	4	827	50	59	3	5.4	4	0	.	4
828	2	4	828	49	59	2	5.4	2	0	.	4
829	2	4	829	63	62	2	5.6	4	0	.	4
830	2	4	830	62	58	2	6.5	1	1	22	4
831	2	4	831	58	52	3	4.6	4	0	.	4
832	2	4	832	57	51	3	4.8	2	0	.	4
833	2	4	833	58	44	2	5.2	3	0	.	4
834	2	4	834	64	44	2	5.1	3	0	.	4
835	2	4	835	65	51	2	6.1	1	0	.	4
836	2	4	836	66	39	3	4.8	4	0	.	4
837	2	4	837	.	.	2	4.7	5	2	.	4
838	2	4	838	58	35	2	5.7	3	0	.	4
839	2	4	839	65	35	2	7.3	1	1	23	4
840	2	4	840	61	19	3	4.5	4	0	.	4
841	2	4	841	55	16	3	4.7	4	0	.	4
842	2	4	842	52	18	1	7.7	1	1	25	4
843	2	4	843	59	17	3	4.4	4	0	.	4
844	2	4	844	64	9	3	3.9	3	0	.	4
845	2	4	845	.	.	3	4.1	4	2	.	4
846	2	4	846	55	3	2	4.8	2	0	.	4
847	3	1	1	99	5	2	5.9	2	0	.	2
848	3	1	2	.	.	3	4.4	4	2	.	2
849	3	1	3	99	9	2	6.2	2	0	.	2
850	3	1	4	85	13	2	6.5	2	0	.	2

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
851	3	1	5	96	14	2	8.3	2	0	.	2
852	3	1	6	88	27	2	5.7	2	0	.	2
853	3	1	7	94	24	2	6.8	1	0	.	2
854	3	1	8	94	33	3	4.0	2	0	.	2
855	3	1	9	.	.	3	4.4	4	2	.	2
856	3	1	10	89	44	2	6.0	1	0	.	2
857	3	1	11	98	44	2	7.0	4	0	.	2
858	3	1	12	91	55	2	9.6	1	1	18	2
859	3	1	13	99	59	2	6.9	2	0	.	2
860	3	1	14	83	62	2	7.9	1	0	.	2
861	3	1	15	75	3	3	4.5	3	0	.	2
862	3	1	16	67	7	3	4.7	3	0	.	2
863	3	1	17	61	2	2	8.0	3	0	.	2
864	3	1	18	77	19	2	8.0	1	1	21	2
865	3	1	19	.	.	3	1.8	4	2	.	2
866	3	1	20	78	23	2	7.0	3	0	.	2
867	3	1	21	75	28	3	2.5	3	0	.	2
868	3	1	22	66	22	3	3.0	3	0	.	2
869	3	1	23	62	29	3	3.2	3	0	.	2
870	3	1	24	55	27	2	5.5	1	0	.	2
871	3	1	25	65	41	2	5.0	2	0	.	2
872	3	1	26	55	39	2	3.9	2	0	.	2
873	3	1	27	56	48	3	2.8	3	0	.	2
874	3	1	28	61	52	3	2.5	2	0	.	2
875	3	1	29	71	63	2	5.5	1	0	.	2
876	3	1	30	57	59	3	2.1	3	0	.	2
877	3	1	31	.	.	3	2.9	4	2	.	2
878	3	1	32	60	15	2	4.2	1	0	.	2
879	3	1	33	.	.	3	2.0	4	2	.	2
880	3	1	34	46	24	3	3.0	2	0	.	2
881	3	1	35	43	34	3	2.8	3	0	.	2
882	3	1	36	52	34	3	3.9	3	0	.	2
883	3	1	37	47	41	3	2.6	2	0	.	2
884	3	1	38	39	28	3	3.8	1	1	14	2
885	3	1	39	35	37	2	5.0	1	1	14	2
886	3	1	40	35	44	3	3.7	2	0	.	2
887	3	1	41	23	46	3	3.9	2	0	.	2
888	3	1	42	22	51	3	3.6	2	0	.	2
889	3	1	43	36	62	2	7.8	1	0	.	2
890	3	1	44	43	52	2	7.4	1	1	20	2
891	3	1	45	43	55	2	8.5	3	0	.	2
892	3	1	46	47	62	2	4.5	2	0	.	2
893	3	1	47	32	50	3	1.5	3	0	.	2
894	3	1	48	.	.	3	2.2	5	2	.	2
895	3	1	49	36	5	3	2.2	3	0	.	2
896	3	1	50	43	7	2	5.6	3	0	.	2
897	3	1	51	47	12	2	4.2	1	0	.	2
898	3	1	52	45	47	3	3.3	3	0	.	2
899	3	1	53	36	15	3	2.9	2	0	.	2
900	3	1	54	36	25	3	3.0	3	0	.	2

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
901	3	1	55	.	.	3	3.9	5	2	.	2
902	3	1	56	24	9	3	2.6	2	0	.	2
903	3	1	57	19	5	3	4.2	1	1	13	2
904	3	1	58	13	13	2	8.8	1	0	.	2
905	3	1	59	1	22	2	4.8	2	0	.	2
906	3	1	60	15	20	2	7.1	4	0	.	2
907	3	1	61	25	22	3	3.5	2	0	.	2
908	3	1	62	24	26	3	4.9	2	0	.	2
909	3	1	63	14	34	3	4.4	1	1	14	2
910	3	1	64	.	.	3	2.8	4	2	.	2
911	3	1	65	25	34	3	2.2	3	0	.	2
912	3	1	66	7	50	3	3.6	2	0	.	2
913	3	1	67	3	60	3	4.2	2	0	.	2
914	3	1	68	5	66	3	4.4	2	0	.	2
915	3	1	69	2	7	3	4.4	1	1	17	2
916	3	2	70	93	6	3	3.6	2	0	.	5
917	3	2	71	97	13	3	2.2	3	0	.	5
918	3	2	72	90	13	3	4.7	1	1	11	5
919	3	2	73	95	20	3	2.3	4	0	.	5
920	3	2	74	89	21	3	2.0	3	0	.	5
921	3	2	75	93	25	3	2.7	2	0	.	5
922	3	2	76	97	30	2	5.4	1	0	.	5
923	3	2	77	92	33	3	3.6	3	1	9	5
924	3	2	78	99	39	2	7.3	1	1	17	5
925	3	2	79	88	37	3	3.2	3	1	10	5
926	3	2	80	83	50	2	4.5	1	0	.	5
927	3	2	81	89	58	3	2.0	2	0	.	5
928	3	2	82	81	54	3	2.5	3	0	.	5
929	3	2	83	81	64	2	5.6	2	1	13	5
930	3	2	84	90	63	3	1.3	3	0	.	5
931	3	2	85	83	70	2	5.6	2	1	14	5
932	3	2	86	91	67	2	7.3	1	0	.	5
933	3	2	87	97	71	2	7.0	1	1	24	5
934	3	2	88	91	77	3	1.8	3	0	.	5
935	3	2	89	98	80	2	7.4	1	0	.	5
936	3	2	90	91	73	3	3.4	3	0	.	5
937	3	2	91	95	90	2	7.0	4	1	21	5
938	3	2	92	79	80	3	2.0	3	0	.	5
939	3	2	93	84	82	3	1.3	3	0	.	5
940	3	2	94	85	11	3	4.1	2	0	.	5
941	3	2	95	80	14	3	3.8	3	0	.	5
942	3	2	96	77	31	2	8.2	1	0	.	5
943	3	2	97	.	.	2	6.2	4	2	.	5
944	3	2	98	65	32	2	7.0	1	1	16	5
945	3	2	99	65	41	2	6.6	1	1	21	5
946	3	2	100	62	50	2	5.6	2	0	.	5
947	3	2	101	69	56	2	7.9	1	0	.	5
948	3	2	102	.	.	3	4.4	1	2	.	5
949	3	2	103	51	73	2	8.8	1	1	21	5
950	3	2	104	56	83	3	3.3	2	1	11	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
951	3	2	105	62	88	3	1.2	3	0	.	5
952	3	2	106	68	89	3	1.5	4	0	.	5
953	3	2	107	73	94	2	7.0	2	1	18	5
954	3	2	108	66	94	2	8.4	1	0	.	5
955	3	2	109	63	97	2	7.7	2	1	19	5
956	3	2	110	57	93	3	4.1	3	0	.	5
957	3	2	111	81	7	3	1.4	3	0	.	5
958	3	2	112	61	1	3	1.3	3	0	.	5
959	3	2	113	48	3	2	6.1	1	1	16	5
960	3	2	114	68	13	3	2.6	3	0	.	5
961	3	2	115	67	19	3	2.7	3	1	10	5
962	3	2	116	50	20	3	2.3	2	0	.	5
963	3	2	117	49	26	3	2.0	3	0	.	5
964	3	2	118	47	37	2	8.3	1	1	15	5
965	3	2	119	56	38	3	1.5	3	0	.	5
966	3	2	120	48	44	3	1.7	4	0	.	5
967	3	2	121	59	47	3	1.3	3	0	.	5
968	3	2	122	49	50	2	4.7	2	0	.	5
969	3	2	123	52	59	2	6.3	1	1	19	5
970	3	2	124	56	65	2	6.3	1	0	.	5
971	3	2	125	42	73	3	2.6	3	0	.	5
972	3	2	126	44	79	2	5.2	1	1	22	5
973	3	2	127	50	89	2	5.4	2	1	16	5
974	3	2	128	44	89	3	3.2	2	1	17	5
975	3	2	129	48	98	2	4.8	1	0	.	5
976	3	2	130	41	2	2	6.4	1	0	.	5
977	3	2	131	33	8	3	2.1	3	1	9	5
978	3	2	132	22	1	2	8.6	1	0	.	5
979	3	2	133	27	18	2	7.7	1	1	18	5
980	3	2	134	35	22	2	7.6	1	0	.	5
981	3	2	135	32	39	2	6.4	1	0	.	5
982	3	2	136	24	39	2	7.2	1	0	.	5
983	3	2	137	35	52	2	6.7	1	0	.	5
984	3	2	138	37	59	3	3.7	3	0	.	5
985	3	2	139	28	57	2	6.0	1	0	.	5
986	3	2	140	29	61	2	4.6	2	1	19	5
987	3	2	141	35	67	2	6.7	1	1	22	5
988	3	2	142	28	69	2	4.3	2	1	18	5
989	3	2	143	20	71	2	5.4	3	0	.	5
990	3	2	144	29	82	2	6.5	2	0	.	5
991	3	2	145	34	85	2	6.0	1	1	25	5
992	3	2	146	38	89	2	6.3	2	0	.	5
993	3	2	147	26	85	3	4.0	4	0	.	5
994	3	2	148	15	8	2	5.3	2	1	17	5
995	3	2	149	5	2	3	2.0	3	0	.	5
996	3	2	150	4	9	2	4.9	1	0	.	5
997	3	2	151	19	19	2	8.0	1	0	.	5
998	3	2	152	14	18	2	5.5	2	1	18	5
999	3	2	153	5	16	3	2.6	3	0	.	5
1000	3	2	154	8	24	2	7.1	1	0	.	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1001	3	2	155	17	28	2	5.0	2	0	.	5
1002	3	2	156	25	27	2	4.8	2	1	17	5
1003	3	2	157	8	33	2	5.0	2	0	.	5
1004	3	2	158	3	42	2	6.9	1	0	.	5
1005	3	2	159	16	41	2	4.7	2	1	19	5
1006	3	2	160	25	50	3	2.3	4	0	.	5
1007	3	2	161	19	52	2	6.4	1	0	.	5
1008	3	2	162	6	49	2	4.8	2	1	19	5
1009	3	2	163	0	54	3	2.3	3	0	.	5
1010	3	2	164	10	58	2	4.7	3	1	22	5
1011	3	2	165	7	65	2	5.8	1	0	.	5
1012	3	2	166	16	58	2	6.5	1	0	.	5
1013	3	2	167	20	67	2	5.3	1	0	.	5
1014	3	2	168	13	72	2	7.3	1	0	.	5
1015	3	2	169	7	85	2	5.9	2	0	.	5
1016	3	2	170	14	86	2	7.1	1	0	.	5
1017	3	2	171	19	84	3	3.9	4	0	.	5
1018	3	2	172	36	98	2	6.4	3	0	.	5
1019	3	2	173	20	94	2	6.9	1	1	23	5
1020	3	2	174	10	97	2	6.0	2	0	.	5
1021	3	2	175	2	98	2	7.3	1	0	.	5
1022	3	3	176	.	.	3	2.0	3	2	.	3
1023	3	3	177	6	13	2	4.8	1	1	12	3
1024	3	3	178	.	.	3	1.8	3	2	.	3
1025	3	3	179	.	.	3	2.0	4	2	.	3
1026	3	3	180	14	11	2	4.8	1	1	13	3
1027	3	3	181	21	8	3	2.7	3	0	.	3
1028	3	3	182	22	2	3	3.0	2	1	11	3
1029	3	3	183	28	1	3	3.2	3	0	.	3
1030	3	3	184	25	8	3	3.0	3	0	.	3
1031	3	3	185	.	.	3	3.7	4	2	.	3
1032	3	3	186	37	12	3	2.4	3	0	.	3
1033	3	3	187	42	6	3	3.3	3	0	.	3
1034	3	3	188	48	1	2	7.8	3	0	.	3
1035	3	3	189	41	15	3	4.5	2	0	.	3
1036	3	3	190	49	17	2	4.5	1	1	15	3
1037	3	3	191	.	.	3	2.3	3	2	.	3
1038	3	3	192	.	.	3	1.8	3	2	.	3
1039	3	3	193	68	0	2	5.4	2	0	.	3
1040	3	3	194	72	5	1	7.6	1	0	.	3
1041	3	3	195	67	25	3	3.2	3	0	.	3
1042	3	3	196	.	.	2	6.6	5	2	.	3
1043	3	3	197	90	9	3	4.0	2	0	.	3
1044	3	3	198	85	12	3	4.5	3	0	.	3
1045	3	3	199	.	.	3	1.3	4	2	.	3
1046	3	3	200	90	21	3	2.6	3	0	.	3
1047	3	3	201	.	.	3	2.2	3	2	.	3
1048	3	3	202	99	23	3	2.7	3	0	.	3
1049	3	3	203	7	27	3	3.9	1	1	13	3
1050	3	3	204	12	26	3	4.4	1	1	13	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1051	3	3	205	12	19	3	2.4	3	0	.	3
1052	3	3	206	24	18	2	4.8	1	1	14	3
1053	3	3	207	27	22	2	4.2	2	1	17	3
1054	3	3	208	26	28	2	5.2	1	0	.	3
1055	3	3	209	35	24	2	5.8	3	0	.	3
1056	3	3	210	40	22	3	2.4	3	0	.	3
1057	3	3	211	43	29	3	4.7	1	1	13	3
1058	3	3	212	.	.	3	2.2	3	2	.	3
1059	3	3	213	46	36	2	4.7	3	0	.	3
1060	3	3	214	50	42	2	5.6	2	1	19	3
1061	3	3	215	58	44	1	8.0	3	0	.	3
1062	3	3	216	57	39	2	4.8	2	0	.	3
1063	3	3	217	67	31	3	2.7	3	0	.	3
1064	3	3	218	.	.	3	2.4	3	2	.	3
1065	3	3	219	66	44	2	5.7	2	1	19	3
1066	3	3	220	61	48	2	4.4	3	0	.	3
1067	3	3	221	80	44	3	4.1	3	0	.	3
1068	3	3	222	80	38	1	8.3	1	1	22	3
1069	3	3	223	87	40	2	6.8	2	1	26	3
1070	3	3	224	86	34	2	7.3	2	0	.	3
1071	3	3	225	.	.	3	1.6	3	2	.	3
1072	3	3	226	.	.	3	5.3	4	2	.	3
1073	3	3	227	93	40	2	7.2	2	1	21	3
1074	3	3	228	99	35	2	4.1	2	0	.	3
1075	3	3	229	98	45	2	7.4	1	0	.	3
1076	3	3	230	.	.	3	2.1	3	2	.	3
1077	3	3	231	.	.	3	2.4	3	2	.	3
1078	3	3	232	16	42	3	2.8	3	0	.	3
1079	3	3	233	16	36	3	2.9	3	0	.	3
1080	3	3	234	21	32	3	3.1	3	1	11	3
1081	3	3	235	21	43	3	3.6	3	0	.	3
1082	3	3	236	26	39	3	4.4	3	0	.	3
1083	3	3	237	33	43	2	4.6	2	1	16	3
1084	3	3	238	31	49	2	5.0	2	0	.	3
1085	3	3	239	42	44	3	4.2	3	0	.	3
1086	3	3	240	46	50	3	4.0	2	0	.	3
1087	3	3	241	52	56	3	2.5	3	0	.	3
1088	3	3	242	55	51	3	3.7	3	0	.	3
1089	3	3	243	57	58	3	3.5	3	0	.	3
1090	3	3	244	68	53	2	5.1	2	1	17	3
1091	3	3	245	84	53	2	7.4	1	0	.	3
1092	3	3	246	90	57	2	7.0	1	0	.	3
1093	3	3	247	96	60	2	6.2	1	1	20	3
1094	3	3	248	99	56	2	4.8	1	1	18	3
1095	3	3	249	.	.	3	2.4	3	2	.	3
1096	3	3	250	9	45	3	4.9	1	0	.	3
1097	3	3	251	11	53	3	3.9	1	0	.	3
1098	3	3	252	.	.	3	2.3	3	2	.	3
1099	3	3	253	17	59	3	4.4	2	1	12	3
1100	3	3	254	9	62	3	2.9	3	0	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1101	3	3	255	7	63	3	2.8	3	0	.	3
1102	3	3	256	.	.	3	2.1	3	2	.	3
1103	3	3	257	22	50	3	3.5	1	0	.	3
1104	3	3	258	.	.	3	1.3	4	2	.	3
1105	3	3	259	31	60	3	3.3	2	1	12	3
1106	3	3	260	39	57	3	2.6	2	0	.	3
1107	3	3	261	40	52	3	4.6	1	1	14	3
1108	3	3	262	48	55	3	2.7	2	0	.	3
1109	3	3	263	66	61	2	6.5	1	1	18	3
1110	3	3	264	70	59	3	3.1	3	0	.	3
1111	3	3	265	76	62	2	5.5	1	0	.	3
1112	3	3	266	82	63	2	7.8	1	0	.	3
1113	3	4	267	8	1	3	3.9	3	0	.	4
1114	3	4	268	5	9	2	5.5	2	0	.	4
1115	3	4	269	5	18	2	5.4	1	1	20	4
1116	3	4	270	12	8	2	7.5	1	0	.	4
1117	3	4	271	21	5	2	4.6	1	0	.	4
1118	3	4	272	25	11	2	4.7	2	0	.	4
1119	3	4	273	29	20	2	6.7	1	1	21	4
1120	3	4	274	32	5	2	7.8	1	0	.	4
1121	3	4	275	.	.	3	6.5	4	2	.	4
1122	3	4	276	42	15	2	7.6	1	0	.	4
1123	3	4	277	39	20	3	2.5	3	0	.	4
1124	3	4	278	49	18	3	1.8	3	0	.	4
1125	3	4	279	63	16	3	1.9	3	0	.	4
1126	3	4	280	61	8	3	5.1	1	1	13	4
1127	3	4	281	62	3	3	2.9	3	0	.	4
1128	3	4	282	69	6	3	4.3	2	0	.	4
1129	3	4	283	70	17	2	5.5	1	0	.	4
1130	3	4	284	79	21	2	8.8	1	0	.	4
1131	3	4	285	77	17	2	7.3	2	0	.	4
1132	3	4	286	77	3	3	2.4	3	0	.	4
1133	3	4	287	84	2	3	4.7	1	0	.	4
1134	3	4	288	87	17	3	4.3	3	0	.	4
1135	3	4	289	92	24	3	3.9	1	0	.	4
1136	3	4	290	98	8	3	2.9	1	0	.	4
1137	3	4	291	2	30	2	5.3	1	0	.	4
1138	3	4	292	14	23	2	6.9	1	1	19	4
1139	3	4	293	21	21	2	6.0	2	0	.	4
1140	3	4	294	24	25	3	4.0	3	0	.	4
1141	3	4	295	19	35	3	2.8	2	0	.	4
1142	3	4	296	30	38	2	4.4	2	0	.	4
1143	3	4	297	33	26	3	4.0	3	0	.	4
1144	3	4	298	41	25	3	2.8	3	0	.	4
1145	3	4	299	42	32	3	3.9	3	0	.	4
1146	3	4	300	53	25	3	3.3	1	1	12	4
1147	3	4	301	58	22	3	2.1	3	0	.	4
1148	3	4	302	68	27	3	1.9	3	0	.	4
1149	3	4	303	74	35	2	4.7	1	0	.	4
1150	3	4	304	86	34	2	5.1	1	0	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1151	3	4	305	.	.	2	4.5	4	2	.	4
1152	3	4	306	84	45	2	5.3	3	0	.	4
1153	3	4	307	93	45	2	7.7	1	1	20	4
1154	3	4	308	93	39	3	2.7	3	0	.	4
1155	3	4	309	98	28	2	4.2	2	0	.	4
1156	3	4	310	9	38	3	2.9	2	0	.	4
1157	3	4	311	5	51	2	8.1	2	0	.	4
1158	3	4	312	15	43	3	2.5	3	0	.	4
1159	3	4	313	23	46	2	6.4	1	1	16	4
1160	3	4	314	37	47	2	8.2	1	1	22	4
1161	3	4	315	37	38	3	2.8	3	0	.	4
1162	3	4	316	47	37	3	4.5	1	0	.	4
1163	3	4	317	52	34	3	4.1	2	0	.	4
1164	3	4	318	56	43	2	6.9	1	0	.	4
1165	3	4	319	54	50	2	5.7	2	0	.	4
1166	3	4	320	68	42	2	5.3	3	0	.	4
1167	3	4	321	65	48	2	5.0	1	1	17	4
1168	3	4	322	70	52	2	4.5	2	0	.	4
1169	3	4	323	76	57	3	4.2	2	0	.	4
1170	3	4	324	81	52	3	2.4	3	0	.	4
1171	3	4	325	85	57	2	6.6	1	1	20	4
1172	3	4	326	92	58	2	5.0	3	0	.	4
1173	3	4	327	99	55	2	4.7	1	0	.	4
1174	3	4	328	98	60	2	4.3	3	0	.	4
1175	3	4	329	1	64	2	7.6	1	1	18	4
1176	3	4	330	19	59	2	6.2	1	0	.	4
1177	3	4	331	25	55	3	2.3	3	0	.	4
1178	3	4	332	24	61	3	1.7	3	0	.	4
1179	3	4	333	32	55	2	4.8	1	0	.	4
1180	3	4	334	35	62	3	3.5	1	0	.	4
1181	3	4	335	48	63	3	3.9	2	0	.	4
1182	3	4	336	56	64	3	5.1	2	0	.	4
1183	3	4	337	63	58	2	10.1	1	0	.	4
1184	3	4	338	61	66	2	5.1	3	0	.	4
1185	3	4	339	73	61	2	5.0	1	0	.	4
1186	3	4	340	90	63	3	2.8	3	0	.	4
1187	3	4	341	99	65	2	6.1	1	0	.	4
1188	3	5	342	63	2	2	5.6	2	0	.	1
1189	3	5	343	55	5	2	5.5	4	0	.	1
1190	3	5	344	43	4	2	5.0	3	0	.	1
1191	3	5	345	47	12	1	8.2	2	0	.	1
1192	3	5	346	54	15	2	3.9	3	0	.	1
1193	3	5	347	60	15	2	4.2	3	0	.	1
1194	3	5	348	63	22	2	5.3	1	0	.	1
1195	3	5	349	61	35	3	2.9	2	0	.	1
1196	3	5	350	51	41	2	5.1	3	0	.	1
1197	3	5	351	54	44	3	2.7	3	0	.	1
1198	3	5	352	63	39	3	2.1	3	0	.	1
1199	3	5	353	66	41	3	2.0	2	0	.	1
1200	3	5	354	60	47	3	1.3	2	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1201	3	5	355	64	49	3	3.6	1	0	.	1
1202	3	5	356	61	54	3	2.5	2	0	.	1
1203	3	5	357	54	56	2	4.7	1	0	.	1
1204	3	5	358	57	64	3	1.9	3	0	.	1
1205	3	5	359	62	62	3	1.0	3	0	.	1
1206	3	5	360	65	64	3	2.4	2	0	.	1
1207	3	5	361	65	68	3	2.0	3	0	.	1
1208	3	5	362	60	68	2	4.0	1	0	.	1
1209	3	5	363	63	79	2	5.0	1	0	.	1
1210	3	5	364	53	78	2	5.9	1	0	.	1
1211	3	5	365	62	82	2	4.3	2	0	.	1
1212	3	5	366	52	84	2	4.7	3	0	.	1
1213	3	5	367	59	90	2	6.1	3	0	.	1
1214	3	5	368	59	95	2	6.2	1	0	.	1
1215	3	5	369	50	94	3	1.6	4	0	.	1
1216	3	5	370	44	95	2	6.3	1	0	.	1
1217	3	5	371	31	0	2	4.2	3	0	.	1
1218	3	5	372	20	4	2	4.3	3	0	.	1
1219	3	5	373	24	17	3	3.8	2	0	.	1
1220	3	5	374	22	24	2	4.8	1	0	.	1
1221	3	5	375	29	31	2	5.6	2	0	.	1
1222	3	5	376	38	35	2	5.6	1	0	.	1
1223	3	5	377	43	31	3	1.2	3	0	.	1
1224	3	5	378	43	36	3	2.4	3	0	.	1
1225	3	5	379	32	39	3	3.8	3	0	.	1
1226	3	5	380	35	44	2	4.6	2	0	.	1
1227	3	5	381	53	46	3	1.7	3	0	.	1
1228	3	5	382	39	50	3	1.7	3	0	.	1
1229	3	5	383	47	56	2	5.5	1	0	.	1
1230	3	5	384	35	65	2	5.1	1	0	.	1
1231	3	5	385	42	67	2	5.0	2	0	.	1
1232	3	5	386	49	63	3	1.7	4	0	.	1
1233	3	5	387	48	66	3	3.8	2	0	.	1
1234	3	5	388	53	71	3	1.6	3	0	.	1
1235	3	5	389	47	82	2	6.2	1	0	.	1
1236	3	5	390	32	74	2	4.4	1	0	.	1
1237	3	5	391	31	83	2	7.7	1	0	.	1
1238	3	5	392	29	81	3	3.8	3	0	.	1
1239	3	5	393	34	92	3	2.5	3	0	.	1
1240	3	5	394	2	96	3	2.8	2	0	.	1
1241	3	5	395	20	98	2	5.7	1	0	.	1
1242	3	5	396	6	2	2	5.9	4	0	.	1
1243	3	5	397	2	9	3	2.7	3	0	.	1
1244	3	5	398	8	14	3	3.1	2	0	.	1
1245	3	5	399	14	10	2	3.9	2	0	.	1
1246	3	5	400	17	14	3	2.7	3	0	.	1
1247	3	5	401	18	21	2	3.7	3	0	.	1
1248	3	5	402	7	20	2	6.2	3	0	.	1
1249	3	5	403	2	28	3	3.6	3	0	.	1
1250	3	5	404	3	33	2	4.8	2	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1251	3	5	405	10	27	3	1.9	3	0	.	1
1252	3	5	406	13	31	3	3.1	2	0	.	1
1253	3	5	407	20	30	3	1.9	3	0	.	1
1254	3	5	408	22	37	2	6.3	1	0	.	1
1255	3	5	409	14	39	3	1.3	4	0	.	1
1256	3	5	410	9	40	3	2.1	3	0	.	1
1257	3	5	411	0	45	2	6.1	1	0	.	1
1258	3	5	412	11	46	3	3.8	2	0	.	1
1259	3	5	413	22	44	3	3.5	3	0	.	1
1260	3	5	414	25	53	3	3.9	1	0	.	1
1261	3	5	415	21	53	2	4.3	1	0	.	1
1262	3	5	416	8	51	3	3.7	2	0	.	1
1263	3	5	417	8	59	3	2.3	4	0	.	1
1264	3	5	418	23	61	3	3.5	3	0	.	1
1265	3	5	419	22	68	3	3.4	2	0	.	1
1266	3	5	420	17	66	2	6.3	2	0	.	1
1267	3	5	421	10	64	2	6.8	1	0	.	1
1268	3	5	422	6	69	3	3.1	3	0	.	1
1269	3	5	423	0	69	3	3.5	2	0	.	1
1270	3	5	424	1	79	3	2.8	2	0	.	1
1271	3	5	425	15	75	2	4.5	3	0	.	1
1272	3	5	426	19	80	3	2.1	3	0	.	1
1273	3	5	427	13	82	3	2.3	3	0	.	1
1274	3	5	428	6	85	3	2.1	2	0	.	1
1275	3	5	429	0	86	3	2.5	2	0	.	1
1276	3	5	430	3	94	3	5.5	1	0	.	1
1277	3	5	431	9	95	3	3.5	2	0	.	1
1278	3	5	432	15	90	3	2.9	4	0	.	1
1279	3	5	433	19	87	2	4.8	1	0	.	1
1280	4	1	434	62	5	2	6.0	1	1	16	5
1281	4	1	435	55	1	2	4.1	1	0	.	5
1282	4	1	436	49	3	2	4.3	1	1	15	5
1283	4	1	437	54	6	2	3.7	2	0	.	5
1284	4	1	438	46	10	2	3.7	2	1	16	5
1285	4	1	439	46	12	2	3.8	2	0	.	5
1286	4	1	440	55	13	2	3.8	2	1	15	5
1287	4	1	441	63	17	2	4.0	1	0	.	5
1288	4	1	442	65	18	2	4.1	2	1	15	5
1289	4	1	443	51	18	2	4.7	3	0	.	5
1290	4	1	444	49	18	2	4.8	2	1	16	5
1291	4	1	445	64	25	2	4.1	2	0	.	5
1292	4	1	446	61	28	2	4.9	1	0	.	5
1293	4	1	447	59	32	2	4.4	1	1	14	5
1294	4	1	448	53	33	2	2.7	2	0	.	5
1295	4	1	449	45	36	2	3.7	2	0	.	5
1296	4	1	450	44	38	2	4.4	2	1	17	5
1297	4	1	451	49	40	2	5.6	1	1	16	5
1298	4	1	452	63	37	2	3.2	1	0	.	5
1299	4	1	453	62	48	2	5.1	1	0	.	5
1300	4	1	454	46	44	3	2.3	3	0	.	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1301	4	1	455	39	49	2	3.8	2	1	16	5
1302	4	1	456	44	49	2	4.9	1	1	17	5
1303	4	1	457	43	53	2	3.7	3	0	.	5
1304	4	1	458	39	57	2	3.9	2	0	.	5
1305	4	1	459	48	55	2	4.9	1	0	.	5
1306	4	1	460	56	70	2	4.5	1	1	15	5
1307	4	1	461	47	67	2	4.1	2	0	.	5
1308	4	1	462	36	65	2	3.1	2	1	13	5
1309	4	1	463	32	61	3	2.7	2	0	.	5
1310	4	1	464	32	65	3	2.2	2	0	.	5
1311	4	1	465	30	70	2	3.8	1	0	.	5
1312	4	1	466	30	74	2	4.3	1	0	.	5
1313	4	1	467	43	75	2	4.8	1	0	.	5
1314	4	1	468	41	80	2	5.8	1	0	.	5
1315	4	1	469	42	82	2	4.9	2	0	.	5
1316	4	1	470	60	90	2	6.0	1	1	11	5
1317	4	1	471	40	6	2	5.7	1	1	17	5
1318	4	1	472	36	7	3	3.1	1	0	.	5
1319	4	1	473	39	9	3	3.5	2	0	.	5
1320	4	1	474	43	10	3	3.0	2	0	.	5
1321	4	1	475	42	16	2	3.7	2	1	17	5
1322	4	1	476	41	18	2	4.7	1	1	18	5
1323	4	1	477	31	25	2	3.2	1	1	13	5
1324	4	1	478	34	26	2	4.3	1	0	.	5
1325	4	1	479	39	24	2	3.5	1	0	.	5
1326	4	1	480	37	30	2	4.0	2	0	.	5
1327	4	1	481	35	38	2	4.7	1	0	.	5
1328	4	1	482	33	41	3	3.0	1	0	.	5
1329	4	1	483	32	45	2	3.5	2	1	19	5
1330	4	1	484	32	46	2	4.9	1	1	19	5
1331	4	1	485	36	46	3	2.9	3	0	.	5
1332	4	1	486	33	51	2	5.1	2	0	.	5
1333	4	1	487	29	53	2	5.9	2	0	.	5
1334	4	1	488	27	66	2	3.7	3	0	.	5
1335	4	1	489	25	67	2	4.9	1	0	.	5
1336	4	1	490	19	62	3	4.4	1	1	13	5
1337	4	1	491	22	69	2	4.7	1	0	.	5
1338	4	1	492	22	74	2	5.3	1	1	18	5
1339	4	1	493	23	74	2	3.5	2	0	.	5
1340	4	1	494	24	77	2	3.7	1	0	.	5
1341	4	1	495	26	79	3	2.4	3	0	.	5
1342	4	1	496	23	81	2	4.0	1	0	.	5
1343	4	1	497	23	84	3	3.2	3	1	14	5
1344	4	1	498	23	83	2	3.5	2	1	14	5
1345	4	1	499	19	89	2	3.8	1	0	.	5
1346	4	1	500	21	90	2	4.7	1	1	15	5
1347	4	1	501	30	97	2	5.0	1	1	12	5
1348	4	1	502	32	8	3	1.6	2	0	.	5
1349	4	1	503	.	.	3	4.2	5	2	.	5
1350	4	1	504	19	8	3	1.8	2	0	.	5

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1351	4	1	505	14	7	3	2.3	2	0	.	5
1352	4	1	506	18	17	3	3.4	1	0	.	5
1353	4	1	507	23	26	3	2.3	1	1	8	5
1354	4	1	508	13	28	3	1.5	2	0	.	5
1355	4	1	509	20	40	3	1.8	2	1	8	5
1356	4	1	510	17	49	2	4.0	3	1	14	5
1357	4	1	511	18	53	2	6.1	1	1	15	5
1358	4	1	512	9	63	3	2.8	1	0	.	5
1359	4	1	513	12	72	2	4.5	1	0	.	5
1360	4	1	514	17	73	2	4.0	1	0	.	5
1361	4	1	515	19	74	3	2.7	3	1	12	5
1362	4	1	516	7	95	3	2.0	2	1	9	5
1363	4	1	517	10	97	3	3.7	1	0	.	5
1364	4	1	518	9	99	3	2.5	2	0	.	5
1365	4	1	519	.	.	3	5.6	5	2	.	5
1366	4	1	520	.	.	2	5.1	5	2	.	5
1367	4	1	521	.	.	3	2.2	5	2	.	5
1368	4	1	522	7	16	3	2.3	1	0	.	5
1369	4	1	523	0	23	3	4.0	1	0	.	5
1370	4	1	524	2	34	2	2.8	1	0	.	5
1371	4	1	525	7	35	2	3.5	1	1	15	5
1372	4	1	526	12	35	2	3.9	1	1	12	5
1373	4	1	527	12	38	2	3.5	2	1	14	5
1374	4	1	528	11	42	2	4.9	1	1	15	5
1375	4	1	529	6	41	2	3.4	2	1	15	5
1376	4	1	530	1	38	3	2.8	2	0	.	5
1377	4	1	531	5	47	3	3.1	1	0	.	5
1378	4	1	532	8	48	3	2.4	1	0	.	5
1379	4	1	533	10	58	3	2.6	3	1	8	5
1380	4	1	534	3	57	3	4.1	2	0	.	5
1381	4	1	535	3	78	2	4.7	1	1	14	5
1382	4	1	536	5	84	2	4.7	1	1	15	5
1383	4	2	537	66	6	2	4.4	1	1	14	3
1384	4	2	538	.	.	3	3.4	3	2	.	3
1385	4	2	539	44	2	3	3.1	1	0	.	3
1386	4	2	540	65	20	2	5.0	1	1	13	3
1387	4	2	541	.	.	3	3.0	3	2	.	3
1388	4	2	542	.	.	3	1.5	3	2	.	3
1389	4	2	543	50	19	3	2.1	2	0	.	3
1390	4	2	544	.	.	3	1.6	3	2	.	3
1391	4	2	545	48	25	3	3.0	1	1	10	3
1392	4	2	546	51	30	3	3.2	1	0	.	3
1393	4	2	547	.	.	3	2.1	3	2	.	3
1394	4	2	548	59	30	3	3.5	1	0	.	3
1395	4	2	549	62	32	3	2.0	2	1	11	3
1396	4	2	550	.	.	3	2.0	3	2	.	3
1397	4	2	551	.	.	3	3.3	3	2	.	3
1398	4	2	552	53	37	2	4.4	1	1	15	3
1399	4	2	553	51	42	3	4.4	2	1	11	3
1400	4	2	554	56	44	3	4.5	1	0	.	3

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1501	4	3	655	16	85	3	2.5	4	0	.	4
1502	4	3	656	14	85	3	2.6	3	0	.	4
1503	4	3	657	16	82	3	3.0	2	0	.	4
1504	4	3	658	14	79	3	2.8	3	0	.	4
1505	4	3	659	10	82	3	1.5	3	0	.	4
1506	4	3	660	1	84	3	2.2	2	0	.	4
1507	4	3	661	4	71	2	5.1	1	1	10	4
1508	4	3	662	17	79	3	2.2	4	0	.	4
1509	4	3	663	23	73	2	4.3	1	0	.	4
1510	4	3	664	24	67	2	4.0	3	0	.	4
1511	4	3	665	21	60	2	4.4	1	0	.	4
1512	4	3	666	12	59	3	4.1	1	1	9	4
1513	4	3	667	7	60	3	2.3	2	0	.	4
1514	4	3	668	3	65	3	1.4	3	0	.	4
1515	4	3	669	3	56	3	2.6	2	0	.	4
1516	4	3	670	9	45	2	4.1	1	1	12	4
1517	4	3	671	6	42	3	2.7	4	0	.	4
1518	4	3	672	3	40	3	2.7	2	0	.	4
1519	4	3	673	11	40	3	2.6	4	0	.	4
1520	4	3	674	15	35	3	3.0	2	0	.	4
1521	4	3	675	11	37	2	3.5	1	1	14	4
1522	4	3	676	7	37	3	2.2	4	0	.	4
1523	4	3	677	5	35	3	2.0	4	0	.	4
1524	4	3	678	1	30	3	3.4	1	0	.	4
1525	4	3	679	.	.	3	1.6	5	2	.	4
1526	4	3	680	13	29	3	3.7	1	1	11	4
1527	4	3	681	11	21	3	3.0	1	0	.	4
1528	4	3	682	2	25	3	2.5	2	0	.	4
1529	4	3	683	18	15	3	4.2	1	0	.	4
1530	4	3	684	16	12	3	3.3	3	0	.	4
1531	4	3	685	11	12	3	3.0	1	0	.	4
1532	4	3	686	7	8	3	2.2	3	0	.	4
1533	4	3	687	16	8	3	3.0	4	0	.	4
1534	4	3	688	16	4	3	3.0	2	0	.	4
1535	4	3	689	11	1	3	3.9	1	0	.	4
1536	4	3	690	.	.	3	1.6	5	2	.	4
1537	4	3	691	7	1	3	3.0	4	0	.	4
1538	4	3	692	3	3	3	3.7	1	0	.	4
1539	4	3	693	20	97	3	2.4	3	0	.	4
1540	4	3	694	31	99	3	3.8	2	0	.	4
1541	4	3	695	21	91	2	3.7	1	1	12	4
1542	4	3	696	29	91	2	3.5	2	0	.	4
1543	4	3	697	33	89	2	3.8	1	1	11	4
1544	4	3	698	27	82	2	3.7	1	0	.	4
1545	4	3	699	29	78	2	3.8	3	0	.	4
1546	4	3	700	30	72	3	2.6	2	0	.	4
1547	4	3	701	34	67	3	2.6	2	0	.	4
1548	4	3	702	27	64	2	3.0	2	0	.	4
1549	4	3	703	27	61	3	2.3	4	0	.	4
1550	4	3	704	31	60	3	3.1	3	0	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1551	4	3	705	26	57	2	3.8	2	0	.	4
1552	4	3	706	34	56	2	3.2	2	0	.	4
1553	4	3	707	33	52	3	3.2	4	0	.	4
1554	4	3	708	29	48	2	3.3	1	1	11	4
1555	4	3	709	25	50	3	2.2	2	0	.	4
1556	4	3	710	33	46	3	2.6	3	0	.	4
1557	4	3	711	24	44	2	3.1	2	0	.	4
1558	4	3	712	32	39	3	3.1	2	0	.	4
1559	4	3	713	31	35	3	2.8	4	0	.	4
1560	4	3	714	26	35	3	2.5	2	0	.	4
1561	4	3	715	19	32	3	3.2	2	0	.	4
1562	4	3	716	17	30	3	2.5	4	0	.	4
1563	4	3	717	18	25	2	4.3	1	1	13	4
1564	4	3	718	21	28	3	3.5	3	0	.	4
1565	4	3	719	30	30	3	3.2	2	0	.	4
1566	4	3	720	35	29	3	2.4	3	0	.	4
1567	4	3	721	28	23	3	2.1	3	0	.	4
1568	4	3	722	23	20	2	4.5	1	1	13	4
1569	4	3	723	33	18	3	3.0	1	0	.	4
1570	4	3	724	28	8	3	3.6	1	0	.	4
1571	4	3	725	23	4	2	3.8	1	1	12	4
1572	4	3	726	33	1	2	4.2	1	1	13	4
1573	4	3	727	50	98	2	3.9	1	1	9	4
1574	4	3	728	42	89	2	4.6	2	0	.	4
1575	4	3	729	35	85	3	1.8	4	0	.	4
1576	4	3	730	43	82	2	4.6	3	0	.	4
1577	4	3	731	41	77	2	4.6	2	0	.	4
1578	4	3	732	48	74	3	3.1	3	0	.	4
1579	4	3	733	53	74	3	2.6	2	0	.	4
1580	4	3	734	51	70	2	3.8	2	0	.	4
1581	4	3	735	46	70	3	2.2	4	0	.	4
1582	4	3	736	48	67	3	3.6	2	0	.	4
1583	4	3	737	38	64	3	2.5	2	0	.	4
1584	4	3	738	39	59	3	3.0	1	0	.	4
1585	4	3	739	52	67	3	2.2	3	0	.	4
1586	4	3	740	35	50	2	3.8	2	0	.	4
1587	4	3	741	47	44	3	3.3	2	0	.	4
1588	4	3	742	43	42	2	3.1	3	0	.	4
1589	4	3	743	41	37	3	2.8	4	0	.	4
1590	4	3	744	46	38	3	2.7	3	0	.	4
1591	4	3	745	44	32	2	4.0	1	0	.	4
1592	4	3	746	53	39	3	3.2	1	0	.	4
1593	4	3	747	52	23	3	4.1	1	0	.	4
1594	4	3	748	43	21	2	4.5	1	1	11	4
1595	4	3	749	40	18	3	2.7	4	0	.	4
1596	4	3	750	43	13	2	5.5	1	1	12	4
1597	4	3	751	63	96	3	3.5	1	1	9	4
1598	4	3	752	64	93	3	2.5	4	0	.	4
1599	4	3	753	59	92	3	3.2	2	0	.	4
1600	4	3	754	61	89	2	3.5	3	0	.	4

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1601	4	3	755	65	87	3	2.8	3	0	.	4
1602	4	3	756	63	83	3	2.3	3	0	.	4
1603	4	3	757	62	82	3	3.1	2	0	.	4
1604	4	3	758	55	71	3	2.3	3	0	.	4
1605	4	3	759	65	74	2	5.1	1	0	.	4
1606	4	3	760	65	67	3	1.9	3	0	.	4
1607	4	3	761	59	53	3	2.8	3	0	.	4
1608	4	3	762	63	51	3	4.1	1	1	9	4
1609	4	3	763	55	45	3	3.2	1	0	.	4
1610	4	3	764	58	42	3	3.1	3	0	.	4
1611	4	3	765	63	32	3	2.8	2	0	.	4
1612	4	3	766	63	28	3	2.7	2	0	.	4
1613	4	3	767	59	17	2	5.3	1	0	.	4
1614	4	3	768	59	11	3	2.2	3	0	.	4
1615	4	3	769	64	8	3	3.2	1	1	10	4
1616	4	3	770	60	3	3	3.0	3	0	.	4
1617	4	3	771	58	1	2	4.1	1	0	.	4
1618	4	4	772	4	93	3	2.9	2	0	.	2
1619	4	4	773	7	88	2	4.3	1	0	.	2
1620	4	4	774	.	.	3	2.1	4	2	.	2
1621	4	4	775	17	95	3	2.6	2	0	.	2
1622	4	4	776	23	97	3	3.2	1	0	.	2
1623	4	4	777	.	.	3	2.1	3	2	.	2
1624	4	4	778	22	85	3	1.9	2	0	.	2
1625	4	4	779	17	83	3	2.9	2	0	.	2
1626	4	4	780	.	.	3	2.2	3	2	.	2
1627	4	4	781	6	75	3	4.0	2	0	.	2
1628	4	4	782	.	.	3	2.3	3	2	.	2
1629	4	4	783	19	75	3	2.8	1	0	.	2
1630	4	4	784	6	64	2	4.7	1	1	10	2
1631	4	4	785	14	66	3	2.9	3	0	.	2
1632	4	4	786	20	63	2	5.0	1	0	.	2
1633	4	4	787	18	44	2	3.9	1	1	12	2
1634	4	4	788	13	46	2	4.1	3	0	.	2
1635	4	4	789	8	47	3	2.9	1	0	.	2
1636	4	4	790	2	41	2	3.8	1	0	.	2
1637	4	4	791	.	.	3	2.5	3	2	.	2
1638	4	4	792	.	.	3	2.4	4	2	.	2
1639	4	4	793	20	33	3	3.0	2	0	.	2
1640	4	4	794	15	29	3	2.6	2	0	.	2
1641	4	4	795	6	33	2	3.9	1	1	10	2
1642	4	4	796	.	.	3	3.1	4	2	.	2
1643	4	4	797	1	23	2	5.3	1	0	.	2
1644	4	4	798	9	21	3	3.5	3	0	.	2
1645	4	4	799	17	25	3	2.5	2	0	.	2
1646	4	4	800	.	.	3	2.9	4	2	.	2
1647	4	4	801	14	19	3	4.5	1	1	10	2
1648	4	4	802	1	19	3	2.8	4	0	.	2
1649	4	4	803	4	12	2	3.8	1	1	11	2
1650	4	4	804	1	9	2	3.2	3	0	.	2

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1651	4	4	805	.	.	3	1.9	4	2	.	2
1652	4	4	806	1	5	2	3.3	2	0	.	2
1653	4	4	807	11	1	2	5.0	1	0	.	2
1654	4	4	808	19	1	2	3.8	1	0	.	2
1655	4	4	809	27	97	2	4.5	1	0	.	2
1656	4	4	810	37	97	3	2.9	1	0	.	2
1657	4	4	811	51	97	3	3.3	1	1	8	2
1658	4	4	812	54	90	3	3.2	1	0	.	2
1659	4	4	813	49	87	2	3.8	2	0	.	2
1660	4	4	814	.	.	3	2.5	4	2	.	2
1661	4	4	815	36	86	2	3.7	2	0	.	2
1662	4	4	816	28	85	3	2.0	2	0	.	2
1663	4	4	817	40	78	2	4.3	1	0	.	2
1664	4	4	818	.	.	3	2.5	4	2	.	2
1665	4	4	819	45	75	2	5.1	1	1	12	2
1666	4	4	820	.	.	3	2.0	3	2	.	2
1667	4	4	821	.	.	3	1.4	3	2	.	2
1668	4	4	822	47	62	3	3.5	1	1	8	2
1669	4	4	823	42	62	3	2.0	2	0	.	2
1670	4	4	824	31	64	2	5.3	1	0	.	2
1671	4	4	825	26	59	2	3.7	1	0	.	2
1672	4	4	826	37	59	3	3.1	2	0	.	2
1673	4	4	827	.	.	3	2.2	4	2	.	2
1674	4	4	828	37	55	3	3.9	2	0	.	2
1675	4	4	829	.	.	3	1.9	3	2	.	2
1676	4	4	830	.	.	3	2.2	3	2	.	2
1677	4	4	831	.	.	3	1.8	3	2	.	2
1678	4	4	832	.	.	1	6.4	5	2	.	2
1679	4	4	833	38	41	3	3.5	2	0	.	2
1680	4	4	834	33	40	3	2.9	2	0	.	2
1681	4	4	835	28	35	2	5.3	1	0	.	2
1682	4	4	836	.	.	3	2.5	3	2	.	2
1683	4	4	837	31	29	3	2.6	3	0	.	2
1684	4	4	838	38	31	2	4.2	2	0	.	2
1685	4	4	839	42	29	2	4.6	1	1	13	2
1686	4	4	840	.	.	3	1.9	4	2	.	2
1687	4	4	841	50	33	2	4.0	1	1	12	2
1688	4	4	842	53	29	3	3.0	3	0	.	2
1689	4	4	843	.	.	3	2.3	3	2	.	2
1690	4	4	844	48	23	3	2.8	2	0	.	2
1691	4	4	845	36	20	2	3.7	1	0	.	2
1692	4	4	846	.	.	3	1.7	3	2	.	2
1693	4	4	847	40	16	3	3.0	2	0	.	2
1694	4	4	848	.	.	3	1.9	5	2	.	2
1695	4	4	849	55	19	3	4.2	1	0	.	2
1696	4	4	850	57	13	2	4.6	3	0	.	2
1697	4	4	851	45	10	2	3.5	2	0	.	2
1698	4	4	852	.	.	3	1.8	3	2	.	2
1699	4	4	853	36	16	3	4.1	1	0	.	2
1700	4	4	854	45	2	2	4.1	1	0	.	2

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1701	4	4	855	52	5	2	3.6	3	0	.	2
1702	4	4	856	52	6	2	2.8	3	0	.	2
1703	4	4	857	.	.	3	2.5	3	2	.	2
1704	4	4	858	62	2	3	2.0	2	0	.	2
1705	4	4	859	46	98	3	2.9	3	0	.	2
1706	4	4	860	51	90	3	4.1	2	0	.	2
1707	4	4	861	59	99	3	3.0	3	0	.	2
1708	4	4	862	60	94	3	3.2	2	0	.	2
1709	4	4	863	65	89	2	4.4	1	0	.	2
1710	4	4	864	62	85	3	3.2	3	0	.	2
1711	4	4	865	51	84	2	3.8	1	1	11	2
1712	4	4	866	51	78	2	2.8	1	1	11	2
1713	4	4	867	53	76	3	2.7	3	0	.	2
1714	4	4	868	.	.	3	2.0	3	2	.	2
1715	4	4	869	65	70	3	2.9	2	0	.	2
1716	4	4	870	53	71	2	4.0	1	0	.	2
1717	4	4	871	58	64	3	2.9	2	0	.	2
1718	4	4	872	.	.	3	2.3	3	2	.	2
1719	4	4	873	66	61	3	2.9	2	0	.	2
1720	4	4	874	63	57	3	2.5	2	0	.	2
1721	4	4	875	57	61	3	3.0	3	0	.	2
1722	4	4	876	51	56	3	3.0	2	0	.	2
1723	4	4	877	66	54	3	2.1	2	0	.	2
1724	4	4	878	62	50	2	3.7	1	0	.	2
1725	4	4	879	58	48	3	3.3	2	0	.	2
1726	4	4	880	.	.	3	1.5	3	2	.	2
1727	4	4	881	64	19	3	3.2	2	0	.	2
1728	4	4	882	66	13	3	2.7	2	0	.	2
1729	4	4	883	.	.	3	1.4	3	2	.	2
1730	4	5	884	6	3	2	4.1	1	0	.	1
1731	4	5	885	2	8	3	3.2	1	0	.	1
1732	4	5	886	4	9	3	4.2	3	0	.	1
1733	4	5	887	12	14	3	2.0	2	0	.	1
1734	4	5	888	14	3	3	3.8	1	0	.	1
1735	4	5	889	20	0	3	3.2	2	0	.	1
1736	4	5	890	23	12	3	4.6	1	0	.	1
1737	4	5	891	24	16	2	3.6	1	0	.	1
1738	4	5	892	31	22	2	4.2	1	0	.	1
1739	4	5	893	29	15	2	3.3	1	0	.	1
1740	4	5	894	28	9	3	1.9	3	0	.	1
1741	4	5	895	33	6	3	3.2	2	0	.	1
1742	4	5	896	36	10	3	2.1	2	0	.	1
1743	4	5	897	36	22	2	3.2	3	0	.	1
1744	4	5	898	39	18	3	2.2	2	0	.	1
1745	4	5	899	45	8	3	2.8	1	0	.	1
1746	4	5	900	38	0	3	2.2	2	0	.	1
1747	4	5	901	50	2	2	4.0	1	0	.	1
1748	4	5	902	53	15	3	2.6	2	0	.	1
1749	4	5	903	50	20	2	4.2	1	0	.	1
1750	4	5	904	58	19	3	2.5	3	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1751	4	5	905	58	12	2	3.6	2	0	.	1
1752	4	5	906	59	4	2	4.4	1	0	.	1
1753	4	5	907	69	8	3	2.9	3	0	.	1
1754	4	5	908	63	14	3	3.8	2	0	.	1
1755	4	5	909	77	25	3	3.5	3	0	.	1
1756	4	5	910	80	34	3	2.8	3	0	.	1
1757	4	5	911	83	29	2	5.9	2	0	.	1
1758	4	5	912	81	24	2	4.5	1	0	.	1
1759	4	5	913	86	9	3	1.8	3	0	.	1
1760	4	5	914	86	4	3	3.5	1	0	.	1
1761	4	5	915	94	3	3	2.8	4	0	.	1
1762	4	5	916	93	6	2	4.5	1	0	.	1
1763	4	5	917	93	16	3	3.1	1	0	.	1
1764	4	5	918	98	26	3	2.1	1	0	.	1
1765	4	5	919	99	18	3	2.5	1	0	.	1
1766	4	5	920	96	16	3	2.5	3	0	.	1
1767	4	5	921	3	21	3	1.9	2	0	.	1
1768	4	5	922	8	23	3	2.5	1	0	.	1
1769	4	5	923	6	28	3	2.5	1	0	.	1
1770	4	5	924	14	40	3	1.9	2	0	.	1
1771	4	5	925	13	36	3	2.2	1	0	.	1
1772	4	5	926	16	30	3	2.8	1	0	.	1
1773	4	5	927	16	25	2	3.4	1	0	.	1
1774	4	5	928	19	27	2	3.5	1	0	.	1
1775	4	5	929	18	37	3	1.9	2	0	.	1
1776	4	5	930	22	32	3	2.5	2	0	.	1
1777	4	5	931	25	26	2	3.1	1	0	.	1
1778	4	5	932	32	29	3	2.3	2	0	.	1
1779	4	5	933	39	31	2	4.4	1	0	.	1
1780	4	5	934	42	26	2	2.7	3	0	.	1
1781	4	5	935	46	25	2	4.1	2	0	.	1
1782	4	5	936	47	32	2	3.7	1	0	.	1
1783	4	5	937	49	34	3	2.2	3	0	.	1
1784	4	5	938	55	36	3	2.5	1	0	.	1
1785	4	5	939	60	32	2	3.7	1	0	.	1
1786	4	5	940	64	27	3	1.9	3	0	.	1
1787	4	5	941	68	39	3	4.1	2	0	.	1
1788	4	5	942	67	44	2	3.3	1	0	.	1
1789	4	5	943	72	43	3	2.9	4	0	.	1
1790	4	5	944	73	45	3	3.4	2	0	.	1
1791	4	5	945	83	44	3	2.9	2	0	.	1
1792	4	5	946	79	38	2	3.3	1	0	.	1
1793	4	5	947	89	36	3	2.8	1	0	.	1
1794	4	5	948	96	31	2	4.2	1	0	.	1
1795	4	5	949	99	36	3	3.4	1	0	.	1
1796	4	5	950	89	42	3	2.2	3	0	.	1
1797	4	5	951	93	46	2	7.1	3	0	.	1
1798	4	5	952	8	47	3	1.4	3	0	.	1
1799	4	5	953	3	55	3	1.8	2	0	.	1
1800	4	5	954	4	60	3	2.6	1	0	.	1

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OBS	BLOCK	PLOT	TAG	EAST	NORTH	CROWN	DBH90	RANK	GRD_TREE	GIRDLE	TREAT
1801	4	5	955	1	65	3	3.4	3	0	.	1
1802	4	5	956	10	63	3	1.5	2	0	.	1
1803	4	5	957	9	57	3	1.8	3	0	.	1
1804	4	5	958	23	41	3	1.2	2	0	.	1
1805	4	5	959	20	46	3	2.0	1	0	.	1
1806	4	5	960	20	50	3	2.7	2	0	.	1
1807	4	5	961	20	61	3	2.4	1	0	.	1
1808	4	5	962	24	66	2	4.0	1	0	.	1
1809	4	5	963	31	65	3	1.9	3	0	.	1
1810	4	5	964	29	59	3	1.7	2	0	.	1
1811	4	5	965	18	46	3	1.8	2	0	.	1
1812	4	5	966	30	49	3	2.5	3	0	.	1
1813	4	5	967	33	45	2	4.3	1	0	.	1
1814	4	5	968	41	43	3	2.9	3	0	.	1
1815	4	5	969	45	40	3	2.9	1	0	.	1
1816	4	5	970	43	48	3	2.5	3	0	.	1
1817	4	5	971	41	52	3	2.1	1	0	.	1
1818	4	5	972	45	58	3	1.8	2	0	.	1
1819	4	5	973	45	65	3	3.1	1	0	.	1
1820	4	5	974	48	59	3	2.0	3	0	.	1
1821	4	5	975	53	59	3	1.7	2	0	.	1
1822	4	5	976	56	53	3	1.4	3	0	.	1
1823	4	5	977	55	56	3	1.9	2	0	.	1
1824	4	5	978	54	61	3	1.8	2	0	.	1
1825	4	5	979	52	66	3	1.9	2	0	.	1
1826	4	5	980	56	62	3	1.3	3	0	.	1
1827	4	5	981	64	61	3	1.5	2	0	.	1
1828	4	5	982	61	56	3	2.8	1	0	.	1
1829	4	5	983	65	52	3	2.9	1	0	.	1
1830	4	5	984	60	51	3	1.8	3	0	.	1
1831	4	5	985	62	53	3	3.0	1	0	.	1
1832	4	5	986	62	49	3	3.1	3	0	.	1
1833	4	5	987	68	57	3	2.5	1	0	.	1
1834	4	5	988	69	59	3	1.7	2	0	.	1
1835	4	5	989	74	61	3	2.0	3	0	.	1
1836	4	5	990	72	48	3	1.7	3	0	.	1
1837	4	5	991	75	47	3	2.3	1	0	.	1
1838	4	5	992	77	41	3	2.8	1	0	.	1
1839	4	5	993	81	61	3	3.0	1	0	.	1
1840	4	5	994	80	64	3	1.4	4	0	.	1
1841	4	5	995	94	52	3	1.5	4	0	.	1

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1	1	1	1	6.9	1.30	2.10	0.35	0.15	40	17	40
2	1	1	2	7.0	0.75	2.35	0.20	0.10	41	11	41
3	1	1	3	5.9	1.35	1.70	0.20	0.10	39	13	39
4	1	1	4	6.4	0.70	2.30	0.25	0.15	38	12	38
5	1	1	8	7.5	2.00	1.20	0.20	0.10	42	16	42
6	1	1	9	7.4	1.65	1.60	0.25	0.15	40	10	40
7	1	1	10	6.6	1.95	1.05	0.30	0.15	38	13	38
8	1	1	11	8.4	1.80	2.05	0.40	0.20	41	9	41
9	1	1	14	6.5	1.15	1.30	0.45	0.20	35	11	35
10	1	1	17	7.4	2.00	1.35	0.40	0.20	41	10	41
11	1	1	18	6.9	2.05	1.35	0.25	0.15	42	11	42
12	1	1	19	8.5	1.65	2.15	0.35	0.15	45	8	45
13	1	1	21	6.4	1.85	0.95	0.25	0.15	36	11	36
14	1	1	22	9.4	2.65	1.30	0.45	0.25	44	8	44
15	1	1	23	5.9	1.00	1.80	0.20	0.10	38	9	38
16	1	1	24	8.4	2.25	1.60	0.30	0.15	41	26	41
17	1	1	25	9.2	2.60	1.45	0.20	0.10	51	12	51
18	1	1	26	7.4	2.10	1.55	0.30	0.15	40	9	40
19	1	1	27	8.4	1.55	2.05	0.25	0.10	43	17	43
20	1	1	29	8.0	2.60	1.50	0.35	0.20	45	13	45
21	1	1	30	5.4	1.25	1.10	0.10	0.05	38	11	38
22	1	1	32	7.5	1.35	2.15	0.30	0.15	43	21	43
23	1	1	33	7.0	1.40	1.70	0.25	0.15	38	11	38
24	1	1	34	6.4	1.35	1.35	0.20	0.10	40	9	40
25	1	1	35	7.0	1.00	1.40	0.20	0.10	41	29	41
26	1	1	38	5.7	1.05	1.60	0.20	0.10	36	12	36
27	1	1	39	6.8	1.80	1.90	0.20	0.10	41	21	41
28	1	1	40	6.4	1.15	1.75	0.20	0.10	38	15	38
29	1	1	41	6.5	1.65	1.50	0.20	0.10	39	19	39
30	1	1	42	6.8	2.00	1.45	0.30	0.15	39	12	39
31	1	1	43	7.4	2.35	1.60	0.25	0.15	44	13	44
32	1	1	44	6.4	1.75	1.30	0.15	0.10	40	21	40
33	1	1	45	6.6	1.50	1.35	0.20	0.10	40	19	40
34	1	1	46	7.2	2.25	1.45	0.25	0.10	40	9	40
35	1	1	47	7.5	1.85	1.35	0.20	0.10	41	20	41
36	1	1	48	7.0	1.20	2.05	0.20	0.10	39	23	39
37	1	1	50	7.5	2.20	1.65	0.20	0.10	43	22	43
38	1	1	52	7.3	1.50	1.75	0.30	0.15	36	14	36
39	1	1	54	5.7	1.35	1.10	0.20	0.10	40	17	40
40	1	1	55	5.9	2.05	1.10	0.20	0.10	36	17	36
41	1	1	57	6.5	1.50	1.60	0.20	0.10	36	12	36
42	1	1	58	8.0	2.60	2.00	0.35	0.20	42	18	42
43	1	1	59	8.8	3.50	1.00	0.30	0.15	43	7	43
44	1	1	60	7.5	2.10	1.35	0.35	0.15	42	23	42
45	1	1	61	7.4	2.30	1.25	0.25	0.10	40	9	40
46	1	1	62	7.2	2.00	1.45	0.15	0.10	40	8	40
47	1	1	64	7.6	2.75	0.95	0.20	0.10	40	15	40
48	1	1	65	5.4	1.20	1.05	0.20	0.10	38	12	38
49	1	1	66	6.9	2.05	1.95	0.30	0.15	42	10	42
50	1	1	67	9.0	2.20	1.90	0.45	0.20	47	23	47

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51	1	1	70	7.1	1.60	2.10	0.30	0.15	41	13	41
52	1	1	72	7.1	1.60	1.85	0.25	0.10	38	22	38
53	1	2	73	9.0	2.40	1.65	0.25	0.15	40	22	40
54	1	2	75	7.7	2.60	1.45	0.30	0.15	42	26	42
55	1	2	76	7.6	1.85	1.25	0.30	0.15	41	16	41
56	1	2	77	7.9	1.75	1.30	0.25	0.15	45	22	45
57	1	2	79	7.2	1.90	1.60	0.35	0.15	38	17	38
58	1	2	80	7.1	1.05	1.45	0.30	0.15	42	16	42
59	1	2	82	8.5	3.15	1.35	0.40	0.20	44	22	44
60	1	2	83	7.5	1.80	1.50	0.20	0.10	42	16	42
61	1	2	84	7.0	1.50	1.50	0.25	0.10	43	15	43
62	1	2	86	6.5	1.15	1.10	0.25	0.10	38	26	38
63	1	2	87	6.8	1.25	1.45	0.25	0.10	40	17	40
64	1	2	89	6.4	1.90	1.15	0.40	0.20	39	13	39
65	1	2	90	6.5	1.50	1.25	0.20	0.10	38	5	38
66	1	2	92	7.5	1.35	1.20	0.30	0.15	40	11	40
67	1	2	94	6.5	1.85	0.95	0.20	0.10	40	21	40
68	1	2	95	7.2	1.70	1.10	0.30	0.20	39	18	39
69	1	2	96	6.9	1.55	1.15	0.25	0.10	38	10	38
70	1	2	98	6.1	1.80	1.10	0.25	0.10	33	14	33
71	1	2	99	8.0	1.55	1.45	0.25	0.15	39	13	39
72	1	2	101	7.1	1.50	1.60	0.30	0.15	40	11	40
73	1	2	102	7.1	1.95	1.30	0.25	0.10	37	19	37
74	1	2	104	6.2	1.80	0.90	0.20	0.10	34	18	34
75	1	2	106	6.4	1.20	1.40	0.30	0.15	40	18	40
76	1	2	107	7.2	2.10	2.00	0.35	0.15	45	17	45
77	1	2	110	8.0	1.85	1.25	0.25	0.10	39	21	39
78	1	2	112	8.0	1.40	1.55	0.30	0.15	45	22	45
79	1	2	113	6.1	1.15	1.00	0.30	0.15	40	25	40
80	1	2	115	7.4	1.65	1.30	0.30	0.15	42	20	42
81	1	2	116	7.3	1.40	1.30	0.25	0.10	37	6	37
82	1	2	117	8.6	1.70	1.45	0.25	0.10	46	20	46
83	1	2	118	6.3	1.20	1.25	0.20	0.10	35	8	35
84	1	2	120	7.6	1.25	1.50	0.25	0.10	43	8	43
85	1	2	121	6.9	2.50	1.00	0.20	0.10	34	16	34
86	1	2	124	7.4	1.80	1.65	0.45	0.25	36	14	36
87	1	2	126	6.4	1.40	1.20	0.20	0.10	42	8	42
88	1	2	128	6.4	1.20	1.35	0.30	0.15	36	16	36
89	1	2	131	6.4	1.65	1.60	0.35	0.15	40	20	40
90	1	2	133	8.1	1.40	1.90	0.25	0.10	41	20	41
91	1	2	135	6.6	1.50	1.50	0.25	0.10	39	10	39
92	1	2	136	6.3	1.05	1.10	0.25	0.10	35	19	35
93	1	2	137	7.5	1.30	1.30	0.25	0.10	46	10	46
94	1	2	140	5.9	1.00	1.15	0.15	0.10	35	8	35
95	1	2	141	7.0	2.00	1.30	0.25	0.10	34	16	34
96	1	2	143	6.3	1.00	1.25	0.20	0.10	35	6	35
97	1	2	145	7.4	1.80	1.60	0.30	0.15	38	7	38
98	1	2	147	6.7	1.30	1.25	0.20	0.10	40	8	40
99	1	2	148	8.0	1.85	1.50	0.20	0.10	47	20	47
100	1	2	150	7.2	1.80	1.60	0.25	0.10	38	10	38

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101	1	2	152	6.9	1.55	1.25	0.20	0.10	41	13	41
102	1	2	154	6.5	1.20	0.90	0.25	0.10	35	12	35
103	1	2	155	7.9	2.00	1.40	0.30	0.15	43	14	43
104	1	2	157	6.7	1.65	1.50	0.25	0.10	37	15	37
105	1	2	158	6.8	1.25	1.35	0.25	0.10	37	16	37
106	1	2	159	6.4	1.60	1.00	0.20	0.10	34	16	34
107	1	2	161	6.7	1.50	0.70	0.20	0.10	37	17	37
108	1	3	163	6.4	1.85	1.30	0.20	0.10	35	17	35
109	1	3	164	7.0	2.25	1.50	0.40	0.20	39	16	39
110	1	3	167	7.6	1.90	1.95	0.25	0.10	40	18	40
111	1	3	168	4.7	1.10	1.35	0.20	0.10	33	17	33
112	1	3	169	5.3	1.80	1.15	0.25	0.15	34	14	34
113	1	3	170	6.3	1.35	0.95	0.20	0.10	34	15	34
114	1	3	171	5.0	1.10	0.70	0.15	0.10	31	7	31
115	1	3	172	6.5	1.20	1.65	0.25	0.10	34	6	34
116	1	3	173	5.5	1.10	1.05	0.20	0.10	41	21	41
117	1	3	174	6.1	1.25	1.10	0.15	0.10	37	23	37
118	1	3	175	4.1	1.30	0.90	0.20	0.10	32	16	32
119	1	3	176	5.1	1.40	0.90	0.20	0.10	30	17	30
120	1	3	177	5.4	1.25	1.15	0.25	0.15	30	13	30
121	1	3	178	5.0	1.05	0.95	0.10	0.05	33	5	33
122	1	3	180	6.6	1.40	1.00	0.15	0.10	38	19	38
123	1	3	181	5.4	1.10	0.80	0.10	0.05	32	21	32
124	1	3	182	6.5	1.30	1.60	0.20	0.10	35	6	35
125	1	3	184	5.7	1.90	1.40	0.35	0.20	34	16	34
126	1	3	185	6.4	1.60	1.15	0.20	0.10	32	13	32
127	1	3	186	6.5	1.20	1.75	0.20	0.10	38	21	38
128	1	3	187	5.9	1.55	1.10	0.20	0.10	28	11	28
129	1	3	188	5.8	1.15	1.55	0.20	0.10	40	17	40
130	1	3	189	7.1	1.85	1.75	0.35	0.15	41	17	41
131	1	3	192	6.0	1.85	1.65	0.30	0.15	36	15	36
132	1	3	193	4.0	1.20	0.85	0.20	0.10	34	14	34
133	1	3	194	6.4	1.30	1.10	0.20	0.10	37	16	37
134	1	3	195	4.1	1.40	0.80	0.15	0.05	30	15	30
135	1	3	196	8.6	1.55	1.85	0.30	0.15	38	15	38
136	1	3	197	9.0	2.45	1.25	0.20	0.10	49	13	49
137	1	3	198	8.1	1.30	1.90	0.25	0.10	43	6	43
138	1	3	199	6.5	1.45	1.05	0.20	0.10	36	6	36
139	1	3	201	7.2	1.50	1.55	0.20	0.10	41	20	41
140	1	3	202	7.4	1.90	1.35	0.20	0.10	41	20	41
141	1	3	203	6.0	1.30	1.20	0.20	0.10	34	20	34
142	1	3	205	6.8	1.05	2.10	0.30	0.15	40	22	40
143	1	3	208	6.3	1.30	1.30	0.20	0.10	39	16	39
144	1	3	209	5.9	1.20	1.20	0.20	0.10	37	20	37
145	1	3	210	6.3	1.40	1.30	0.15	0.05	41	18	41
146	1	3	211	6.9	1.60	1.30	0.20	0.10	37	15	37
147	1	3	212	6.4	1.00	1.85	0.30	0.15	43	21	43
148	1	3	214	7.5	1.75	1.95	0.30	0.15	45	16	45
149	1	3	215	5.3	1.75	1.40	0.30	0.15	37	24	37
150	1	3	216	5.3	1.00	1.20	0.20	0.10	35	19	35

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151	1	3	217	6.2	1.75	1.25	0.15	0.05	36	20	36
152	1	3	218	7.3	1.90	1.25	0.30	0.15	40	17	40
153	1	3	219	4.0	1.20	0.90	0.20	0.10	40	21	40
154	1	3	220	5.7	0.85	1.10	0.15	0.05	39	16	39
155	1	3	221	6.4	1.55	1.55	0.20	0.10	38	13	38
156	1	3	222	5.9	1.40	1.10	0.25	0.10	36	14	36
157	1	3	223	5.4	1.10	1.15	0.20	0.10	37	21	37
158	1	3	224	5.1	1.05	0.90	0.20	0.10	40	8	40
159	1	3	225	6.8	1.80	1.20	0.20	0.10	39	9	39
160	1	3	226	6.3	1.50	1.00	0.20	0.10	38	14	38
161	1	3	227	6.9	1.30	1.00	0.20	0.10	43	23	43
162	1	3	228	5.4	1.30	0.95	0.25	0.10	36	19	36
163	1	3	229	6.6	1.00	1.30	0.30	0.15	39	10	39
164	1	3	230	7.3	1.00	2.15	0.20	0.10	42	19	42
165	1	3	231	4.0	1.00	0.80	0.20	0.10	30	5	30
166	1	3	232	6.5	1.10	1.55	0.20	0.10	41	22	41
167	1	3	233	5.2	1.20	0.85	0.20	0.10	38	17	38
168	1	3	234	6.3	1.95	0.80	0.25	0.10	42	18	42
169	1	3	235	7.1	1.35	2.00	0.30	0.15	42	16	42
170	1	4	236	7.7	2.00	1.05	0.20	0.10	41	22	41
171	1	4	237	6.5	1.40	1.60	0.20	0.10	38	21	38
172	1	4	238	7.8	1.15	1.70	0.20	0.10	42	19	42
173	1	4	239	6.2	1.45	1.20	0.20	0.10	40	11	40
174	1	4	240	7.3	1.60	1.00	0.25	0.10	49	21	49
175	1	4	241	7.5	1.20	1.90	0.25	0.15	44	16	44
176	1	4	242	7.8	1.50	1.60	0.25	0.10	42	21	42
177	1	4	243	6.5	1.30	1.60	0.20	0.10	42	32	42
178	1	4	244	6.9	1.35	1.55	0.20	0.10	39	18	39
179	1	4	245	6.9	1.65	1.05	0.20	0.10	44	22	44
180	1	4	246	6.8	1.10	1.95	0.20	0.10	48	27	48
181	1	4	247	6.4	1.70	1.35	0.20	0.10	44	25	44
182	1	4	248	7.6	1.20	2.15	0.30	0.15	46	20	46
183	1	4	249	6.9	1.35	1.75	0.30	0.15	43	20	43
184	1	4	250	6.0	1.10	1.60	0.30	0.15	39	10	39
185	1	4	251	7.3	1.30	2.30	0.30	0.15	44	23	44
186	1	4	252	5.9	1.45	1.30	0.25	0.15	38	23	38
187	1	4	253	7.8	1.70	1.70	0.40	0.20	44	16	44
188	1	4	254	7.1	2.35	1.70	0.30	0.15	40	17	40
189	1	4	255	6.4	1.80	1.15	0.20	0.10	40	12	40
190	1	4	256	6.4	2.55	1.00	0.25	0.10	45	23	45
191	1	4	257	6.6	1.50	1.25	0.25	0.10	40	19	40
192	1	4	258	4.7	1.00	0.90	0.30	0.15	34	20	34
193	1	4	259	5.0	1.00	1.05	0.20	0.10	36	19	36
194	1	4	260	5.5	1.00	1.70	0.30	0.15	41	21	41
195	1	4	261	7.7	0.95	2.25	0.30	0.15	45	7	45
196	1	4	262	5.8	1.60	1.35	0.20	0.10	37	20	37
197	1	4	263	5.8	1.40	1.45	0.30	0.10	40	25	40
198	1	4	264	8.0	2.30	1.45	0.30	0.15	42	26	42
199	1	4	265	5.8	1.00	1.30	0.25	0.10	38	9	38
200	1	4	266	6.7	1.10	1.45	0.20	0.10	40	21	40

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201	1	4	267	7.4	1.50	1.80	0.30	0.15	46	16	46
202	1	4	268	5.2	1.15	1.35	0.25	0.10	38	15	38
203	1	4	269	6.2	1.90	1.15	0.20	0.10	40	16	40
204	1	4	270	5.9	1.50	1.50	0.25	0.10	38	21	38
205	1	4	271	6.1	1.65	1.05	0.20	0.10	39	17	39
206	1	4	272	3.7	0.90	0.85	0.20	0.10	35	20	35
207	1	4	273	8.2	1.90	1.50	0.35	0.20	42	15	42
208	1	4	274	6.7	1.50	1.50	0.20	0.10	40	23	40
209	1	4	275	7.6	1.60	1.90	0.30	0.15	43	21	43
210	1	4	276	7.8	2.00	1.60	0.30	0.15	39	18	39
211	1	4	277	6.8	1.50	1.50	0.30	0.15	43	17	43
212	1	4	278	7.4	1.25	1.60	0.20	0.10	42	20	42
213	1	4	279	9.2	2.15	1.65	0.20	0.10	40	21	40
214	1	4	280	6.3	1.40	1.40	0.25	0.15	42	12	42
215	1	4	281	8.7	2.70	0.90	0.20	0.10	49	21	49
216	1	4	282	7.3	1.50	1.50	0.25	0.10	47	18	47
217	1	4	283	4.4	1.15	0.80	0.20	0.10	35	13	35
218	1	4	284	8.7	2.00	1.85	0.25	0.10	44	7	44
219	1	4	285	5.5	1.40	1.35	0.30	0.15	41	20	41
220	1	4	286	7.3	1.60	1.20	0.20	0.10	41	19	41
221	1	4	287	6.0	1.15	1.20	0.25	0.10	40	23	40
222	1	4	288	6.1	1.60	1.30	0.30	0.15	39	7	39
223	1	4	289	6.5	0.65	0.70	0.20	0.10	38	11	38
224	1	4	290	7.8	2.00	1.10	0.20	0.10	44	23	44
225	1	4	291	7.3	1.60	1.50	0.25	0.10	43	18	43
226	1	4	292	7.7	1.65	1.30	0.20	0.10	44	5	44
227	1	4	293	6.8	1.40	1.30	0.20	0.10	40	8	40
228	1	4	294	7.4	1.10	0.70	0.20	0.10	41	16	41
229	1	4	295	7.4	1.60	1.80	0.30	0.15	44	20	44
230	1	4	296	4.0	1.30	0.60	0.30	0.15	34	15	34
231	1	4	297	8.7	2.50	1.10	0.20	0.10	44	19	44
232	1	4	298	8.3	1.15	1.70	0.30	0.15	39	13	39
233	1	4	299	5.6	1.80	0.80	0.20	0.10	38	20	38
234	1	4	301	8.5	1.80	1.90	0.30	0.15	47	23	47
235	1	4	302	6.6	1.30	1.45	0.20	0.10	39	21	39
236	1	4	303	6.3	0.75	2.05	0.30	0.15	39	15	39
237	1	4	304	5.7	1.00	1.60	0.40	0.20	41	14	41
238	1	4	305	6.9	1.70	2.20	0.30	0.15	38	8	38
239	1	4	306	7.2	1.60	1.00	0.25	0.10	41	18	41
240	1	4	307	6.4	1.40	1.30	0.20	0.10	40	18	40
241	1	4	308	7.2	2.30	1.30	0.35	0.15	47	28	47
242	1	4	309	5.6	1.20	1.00	0.30	0.15	37	19	37
243	1	4	310	7.2	1.35	1.75	0.25	0.10	40	10	40
244	1	4	311	7.8	2.00	1.45	0.30	0.15	44	12	44
245	1	4	312	7.0	1.50	1.10	0.20	0.10	45	27	45
246	1	4	313	6.0	1.65	1.20	0.20	0.10	42	18	42
247	1	4	314	7.9	1.40	1.90	0.40	0.20	49	19	49
248	1	4	315	8.2	1.90	1.45	0.30	0.15	47	8	47
249	1	4	316	8.1	2.25	1.25	0.30	0.15	46	27	46
250	1	4	317	7.7	2.00	1.20	0.20	0.10	44	22	44

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251	1	4	318	6.7	1.40	1.70	0.20	0.10	35	5	35
252	1	4	319	7.4	1.65	1.60	0.20	0.10	39	17	39
253	1	4	320	5.2	1.70	1.20	0.25	0.10	35	19	35
254	1	4	321	7.2	1.60	1.80	0.30	0.15	40	20	40
255	1	4	322	8.1	1.50	1.50	0.25	0.10	47	26	47
256	1	4	323	7.2	1.50	1.60	0.20	0.10	39	14	39
257	1	4	324	5.9	1.30	1.20	0.40	0.20	39	8	39
258	1	4	325	7.1	2.50	0.90	0.20	0.10	34	5	34
259	1	4	326	8.5	2.25	1.40	0.30	0.15	45	7	45
260	2	1	327	6.1	1.55	0.80	0.30	0.15	35	15	35
261	2	1	328	8.4	2.20	0.70	0.20	0.10	42	17	42
262	2	1	330	5.2	1.25	0.85	0.15	0.05	36	18	36
263	2	1	332	5.0	1.60	0.70	0.20	0.10	32	13	32
264	2	1	333	5.1	1.50	1.10	0.20	0.10	33	20	33
265	2	1	334	6.4	1.80	1.30	0.25	0.10	31	11	31
266	2	1	335	5.5	1.40	0.65	0.25	0.15	32	9	32
267	2	1	339	5.1	1.35	0.85	0.20	0.10	34	22	34
268	2	1	341	5.3	1.60	1.10	0.20	0.10	35	10	35
269	2	1	343	6.2	1.55	1.50	0.30	0.20	40	7	40
270	2	1	344	4.6	1.30	0.80	0.20	0.10	30	14	30
271	2	1	347	4.9	1.40	0.90	0.25	0.15	31	13	31
272	2	1	349	6.7	2.00	1.60	0.40	0.20	39	15	39
273	2	1	350	3.9	1.20	0.80	0.20	0.10	29	13	29
274	2	1	351	4.7	1.15	0.75	0.20	0.10	32	16	32
275	2	1	353	5.5	1.65	1.15	0.35	0.15	35	20	35
276	2	1	356	3.4	1.15	0.45	0.25	0.15	29	19	29
277	2	1	359	4.7	1.10	1.20	0.35	0.20	31	6	31
278	2	1	361	5.7	1.55	1.10	0.35	0.20	32	8	32
279	2	1	363	5.4	1.60	0.95	0.20	0.10	30	13	30
280	2	1	365	3.8	0.80	0.85	0.30	0.15	27	3	27
281	2	1	366	8.1	1.80	2.45	0.45	0.20	38	4	38
282	2	1	367	4.9	1.35	0.90	0.15	0.10	32	8	32
283	2	1	369	3.6	1.15	0.55	0.25	0.10	27	15	27
284	2	1	370	3.8	1.25	0.90	0.30	0.15	31	12	31
285	2	1	371	6.0	1.60	1.50	0.30	0.20	38	6	38
286	2	1	372	5.5	1.80	0.85	0.20	0.10	32	12	32
287	2	1	373	6.5	1.85	0.85	0.20	0.10	35	10	35
288	2	1	374	4.9	1.45	0.85	0.20	0.10	32	12	32
289	2	1	376	5.5	1.90	0.90	0.20	0.10	34	12	34
290	2	1	377	4.2	1.05	0.75	0.10	0.05	29	6	29
291	2	1	378	5.7	1.60	1.05	0.20	0.10	37	19	37
292	2	1	381	4.4	0.85	1.25	0.15	0.05	33	12	33
293	2	1	383	6.2	2.20	1.15	0.25	0.10	35	11	35
294	2	1	384	6.2	2.00	0.70	0.20	0.10	33	8	33
295	2	1	386	3.2	1.20	0.25	0.15	0.05	26	14	26
296	2	1	387	4.9	1.15	1.20	0.30	0.15	30	10	30
297	2	1	388	6.7	2.10	1.05	0.25	0.15	36	7	36
298	2	1	391	5.7	1.50	1.30	0.30	0.15	37	11	37
299	2	1	392	4.6	1.00	1.15	0.35	0.20	30	11	30
300	2	1	394	3.9	0.75	0.65	0.20	0.10	31	18	31

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301	2	1	396	4.4	1.10	0.85	0.15	0.10	32	13	32
302	2	1	398	4.1	1.75	1.45	0.20	0.10	32	23	32
303	2	1	399	3.5	0.75	0.55	0.10	0.05	28	17	28
304	2	1	400	5.4	1.65	1.25	0.25	0.10	33	9	33
305	2	1	401	6.2	1.65	1.35	0.40	0.20	35	17	35
306	2	1	403	6.3	1.95	1.25	0.20	0.10	36	5	36
307	2	1	406	7.8	2.00	1.20	0.20	0.10	40	6	40
308	2	1	407	4.8	1.00	1.00	0.10	0.05	33	7	33
309	2	1	408	6.1	1.95	1.05	0.35	0.20	35	7	35
310	2	1	411	8.6	2.70	1.20	0.25	0.15	41	15	41
311	2	1	414	6.6	1.60	1.20	0.25	0.10	31	7	31
312	2	1	415	6.5	1.70	1.45	0.35	0.15	36	13	36
313	2	1	416	7.6	2.05	1.60	0.20	0.10	37	14	37
314	2	1	420	7.1	1.55	1.40	0.30	0.15	38	15	38
315	2	1	422	6.0	1.45	1.35	0.20	0.10	40	9	40
316	2	1	425	7.4	2.30	1.55	0.35	0.20	38	9	38
317	2	1	427	6.7	1.65	1.45	0.35	0.15	35	16	35
318	2	1	428	3.8	0.90	0.85	0.10	0.05	25	9	25
319	2	1	429	4.8	1.45	1.15	0.35	0.15	31	10	31
320	2	1	430	6.6	1.90	1.30	0.20	0.10	39	12	39
321	2	1	431	3.8	1.35	0.40	0.10	0.05	30	16	30
322	2	1	433	6.3	1.80	0.95	0.10	0.05	36	22	36
323	2	1	434	7.0	1.80	1.55	0.30	0.15	40	14	40
324	2	1	435	8.2	1.40	1.75	0.35	0.20	44	11	44
325	2	1	436	6.7	1.70	0.95	0.30	0.15	41	17	41
326	2	1	439	6.8	1.80	1.50	0.30	0.15	38	12	38
327	2	1	440	6.5	1.90	1.15	0.25	0.10	30	9	30
328	2	1	442	4.3	1.15	1.10	0.30	0.15	31	9	31
329	2	1	443	6.6	1.70	1.30	0.25	0.10	34	12	34
330	2	1	444	5.6	1.55	1.15	0.20	0.10	33	14	33
331	2	1	445	6.1	1.55	0.95	0.20	0.10	39	17	39
332	2	1	447	7.7	2.70	1.40	0.20	0.10	39	16	39
333	2	1	449	4.9	1.50	0.50	0.10	0.05	29	15	29
334	2	1	450	5.1	1.20	0.70	0.20	0.10	32	8	32
335	2	1	453	4.3	1.50	0.65	0.25	0.10	31	8	31
336	2	1	454	6.4	1.30	1.40	0.25	0.10	36	14	36
337	2	1	455	5.8	1.40	1.00	0.20	0.10	36	12	36
338	2	1	456	7.8	1.95	1.45	0.25	0.10	42	12	42
339	2	1	457	7.0	1.65	1.70	0.45	0.20	40	3	40
340	2	1	458	4.3	1.30	1.25	0.25	0.25	33	18	33
341	2	1	461	6.7	1.45	1.35	0.40	0.20	39	11	39
342	2	1	462	7.1	1.70	1.20	0.20	0.10	37	8	37
343	2	1	464	3.5	0.75	0.75	0.20	0.10	26	9	26
344	2	1	465	8.3	2.00	1.80	0.35	0.20	41	15	41
345	2	1	467	3.8	1.05	0.75	0.25	0.15	26	5	26
346	2	1	468	5.2	1.00	0.80	0.15	0.05	37	7	37
347	2	1	470	5.9	1.55	0.90	0.30	0.15	38	13	38
348	2	2	475	4.7	2.05	0.75	0.25	0.15	32	11	32
349	2	2	476	5.3	1.50	0.90	0.20	0.10	35	11	35
350	2	2	477	4.4	1.50	0.70	0.20	0.10	30	12	30

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351	2	2	478	5.9	1.40	0.90	0.10	0.05	36	9	36
352	2	2	479	4.1	1.25	0.85	0.10	0.05	32	18	32
353	2	2	480	7.8	2.05	1.00	0.15	0.10	40	6	40
354	2	2	481	5.5	1.05	1.00	0.15	0.05	34	14	34
355	2	2	482	3.7	1.25	1.00	0.20	0.10	30	13	30
356	2	2	483	6.6	1.40	1.00	0.25	0.15	37	16	37
357	2	2	484	6.0	1.30	1.00	0.20	0.10	35	22	35
358	2	2	486	5.3	1.15	1.40	0.25	0.10	33	7	33
359	2	2	487	6.6	2.00	1.45	0.30	0.10	39	15	39
360	2	2	488	3.9	1.10	0.55	0.20	0.10	30	20	30
361	2	2	489	6.7	2.75	1.10	0.15	0.05	38	2	38
362	2	2	490	6.5	2.35	1.40	0.25	0.15	38	16	38
363	2	2	491	6.0	1.25	0.95	0.25	0.10	37	12	37
364	2	2	492	2.9	0.45	0.65	0.10	0.05	31	18	31
365	2	2	493	6.4	1.65	1.00	0.25	0.15	40	7	40
366	2	2	494	6.4	1.35	1.20	0.45	0.25	47	15	47
367	2	2	495	6.0	1.35	1.75	0.20	0.10	41	12	41
368	2	2	496	6.4	2.20	0.75	0.25	0.15	42	9	42
369	2	2	497	4.4	1.05	0.70	0.10	0.05	30	11	30
370	2	2	498	5.5	1.50	1.05	0.10	0.05	34	15	34
371	2	2	500	4.2	1.00	0.65	0.20	0.10	33	13	33
372	2	2	501	5.3	1.45	0.90	0.10	0.05	38	20	38
373	2	2	503	5.3	1.75	1.05	0.20	0.10	34	9	34
374	2	2	504	6.0	1.50	1.00	0.15	0.05	42	21	42
375	2	2	506	5.5	2.00	0.75	0.10	0.05	40	18	40
376	2	2	507	4.3	1.40	0.55	0.15	0.05	32	17	32
377	2	2	509	5.5	1.15	1.10	0.25	0.10	34	15	34
378	2	2	510	5.4	1.50	0.90	0.15	0.05	38	12	38
379	2	2	511	6.3	1.25	1.25	0.20	0.10	38	11	38
380	2	2	512	6.4	2.20	1.15	0.15	0.05	34	12	34
381	2	2	513	5.8	1.45	1.00	0.20	0.10	38	16	38
382	2	2	514	5.0	1.15	0.95	0.10	0.05	31	9	31
383	2	2	515	4.9	1.75	0.75	0.15	0.05	32	15	32
384	2	2	516	3.1	1.30	0.40	0.10	0.05	24	5	24
385	2	2	518	7.5	2.00	1.55	0.25	0.15	34	8	34
386	2	2	519	5.0	1.90	0.90	0.10	0.05	36	20	36
387	2	2	520	7.5	2.20	1.55	0.25	0.10	43	10	43
388	2	2	521	5.7	1.50	0.90	0.20	0.10	36	5	36
389	2	2	522	5.9	1.95	1.00	0.25	0.10	39	20	39
390	2	2	523	5.0	1.05	1.10	0.15	0.05	32	11	32
391	2	2	524	6.3	1.80	0.90	0.15	0.05	35	11	35
392	2	2	525	6.6	2.00	0.85	0.20	0.15	40	14	40
393	2	2	526	7.4	2.10	1.25	0.30	0.15	44	17	44
394	2	2	528	6.5	1.45	1.40	0.30	0.10	40	19	40
395	2	2	529	2.9	0.75	0.75	0.15	0.05	25	13	25
396	2	2	530	6.4	1.95	1.00	0.20	0.10	34	12	34
397	2	2	531	3.1	0.90	0.65	0.15	0.05	30	22	30
398	2	2	532	6.8	1.80	1.20	0.15	0.05	42	20	42
399	2	2	533	5.6	2.40	0.00	0.15	0.05	37	23	37
400	2	2	534	4.3	1.00	1.05	0.25	0.10	32	15	32

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
401	2	2	535	4.8	1.15	0.95	0.15	0.05	32	13	32
402	2	2	536	6.5	1.55	2.00	0.30	0.15	41	12	41
403	2	2	537	4.4	1.40	0.60	0.15	0.05	29	17	29
404	2	2	538	5.9	1.50	1.00	0.30	0.10	36	17	36
405	2	2	539	4.9	1.30	0.90	0.10	0.05	30	10	30
406	2	2	540	4.9	1.30	0.70	0.15	0.05	32	14	32
407	2	2	541	6.3	1.50	0.95	0.20	0.10	36	6	36
408	2	2	542	4.2	1.00	0.60	0.10	0.05	32	14	32
409	2	2	543	5.4	1.25	1.00	0.30	0.15	37	15	37
410	2	2	544	6.8	1.30	1.20	0.20	0.05	40	18	40
411	2	2	545	5.5	1.55	1.20	0.20	0.10	34	7	34
412	2	2	546	5.7	1.40	0.85	0.20	0.10	39	19	39
413	2	2	547	5.8	1.50	1.10	0.10	0.05	33	12	33
414	2	2	549	5.8	1.80	1.30	0.10	0.05	32	15	32
415	2	2	552	5.6	1.00	1.15	0.15	0.05	37	23	37
416	2	2	555	6.0	1.70	1.30	0.15	0.05	36	7	36
417	2	2	557	3.2	0.50	0.50	0.10	0.05	28	9	28
418	2	2	558	3.5	1.05	0.40	0.20	0.10	31	11	31
419	2	2	559	8.2	2.00	1.80	0.10	0.05	45	13	45
420	2	2	561	5.1	1.40	0.75	0.10	0.05	28	6	28
421	2	2	563	5.2	0.60	1.30	0.25	0.10	32	11	32
422	2	2	564	6.5	1.90	0.80	0.15	0.05	34	11	34
423	2	2	565	3.0	0.65	0.25	0.15	0.05	31	14	31
424	2	2	566	6.4	2.00	1.30	0.20	0.10	38	18	38
425	2	2	567	6.0	1.25	1.15	0.15	0.10	36	15	36
426	2	2	568	5.9	1.85	0.80	0.10	0.05	38	19	38
427	2	2	569	7.0	1.95	1.05	0.20	0.10	38	11	38
428	2	2	570	6.1	1.70	1.30	0.15	0.05	38	10	38
429	2	2	572	5.3	1.50	0.45	0.20	0.10	32	13	32
430	2	2	573	4.7	1.30	0.70	0.10	0.05	36	12	36
431	2	2	574	3.7	1.00	0.65	0.10	0.05	31	19	31
432	2	2	575	5.5	1.40	0.75	0.10	0.05	32	10	32
433	2	2	577	4.0	1.20	0.55	0.10	0.05	29	15	29
434	2	2	578	5.1	1.80	0.40	0.10	0.05	32	16	32
435	2	2	579	7.0	1.60	1.25	0.15	0.05	38	8	38
436	2	2	580	5.6	1.70	0.90	0.20	0.10	31	13	31
437	2	2	581	3.9	1.00	0.55	0.15	0.05	27	12	27
438	2	2	582	3.5	1.00	0.40	0.10	0.05	29	14	29
439	2	2	583	5.4	1.50	0.75	0.20	0.10	36	13	36
440	2	2	584	5.1	1.60	0.65	0.10	0.05	32	16	32
441	2	2	585	5.5	1.60	0.80	0.20	0.10	37	7	37
442	2	2	586	6.2	1.25	1.25	0.25	0.15	37	4	37
443	2	2	587	4.1	2.00	0.00	0.20	0.10	29	13	29
444	2	2	588	5.8	1.00	1.10	0.20	0.10	38	9	38
445	2	2	589	5.9	1.40	1.00	0.25	0.15	36	12	36
446	2	2	591	6.4	1.70	0.85	0.20	0.10	39	15	39
447	2	2	592	4.2	1.00	0.85	0.20	0.10	28	9	28
448	2	2	593	5.8	1.90	0.70	0.20	0.10	36	12	36
449	2	2	594	7.7	2.05	1.20	0.15	0.05	43	8	43
450	2	2	596	7.9	1.90	1.35	0.15	0.10	45	7	45

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451	2	2	597	7.2	2.20	0.60	0.10	0.05	38	9	38
452	2	2	599	6.0	2.00	0.90	0.15	0.05	35	16	35
453	2	2	600	7.0	1.75	1.15	0.15	0.05	39	18	39
454	2	2	601	5.6	2.30	0.00	0.10	0.05	36	15	36
455	2	2	602	6.5	2.90	0.00	0.25	0.10	40	21	40
456	2	2	603	6.7	1.60	1.00	0.15	0.05	40	15	40
457	2	2	605	5.6	1.25	1.25	0.20	0.10	34	15	34
458	2	2	606	4.5	0.90	1.00	0.10	0.05	36	20	36
459	2	2	607	4.7	1.25	0.80	0.10	0.05	33	6	33
460	2	2	608	5.4	1.30	0.75	0.10	0.05	36	19	36
461	2	2	610	5.5	1.30	1.35	0.20	0.10	36	15	36
462	2	2	612	5.9	1.40	1.00	0.15	0.05	38	17	38
463	2	2	613	5.8	1.20	0.95	0.10	0.05	35	13	35
464	2	2	614	4.4	1.15	0.50	0.10	0.05	31	6	31
465	2	2	616	4.5	0.60	1.65	0.15	0.05	32	15	32
466	2	2	617	3.6	0.90	0.60	0.10	0.05	28	14	28
467	2	2	618	3.8	1.25	0.50	0.10	0.05	32	17	32
468	2	2	619	4.6	1.30	1.00	0.10	0.05	34	10	34
469	2	2	621	5.5	1.25	1.15	0.15	0.05	39	15	39
470	2	2	623	5.5	1.50	0.75	0.20	0.10	38	12	38
471	2	3	625	7.5	1.75	1.35	0.20	0.10	37	14	37
472	2	3	626	7.2	1.65	1.45	0.20	0.10	36	8	36
473	2	3	628	8.0	1.80	1.25	0.20	0.10	39	11	39
474	2	3	631	6.6	1.60	1.30	0.30	0.15	36	13	36
475	2	3	632	6.2	1.55	1.35	0.20	0.10	39	10	39
476	2	3	633	7.7	1.80	1.45	0.25	0.10	36	8	36
477	2	3	635	7.1	2.00	0.90	0.20	0.10	43	6	43
478	2	3	636	6.6	1.85	1.10	0.20	0.10	39	17	39
479	2	3	637	5.8	1.70	0.90	0.20	0.10	33	18	33
480	2	3	638	6.5	1.70	1.00	0.20	0.10	41	12	41
481	2	3	639	8.4	2.45	1.05	0.20	0.10	48	16	48
482	2	3	640	6.7	1.80	0.80	0.25	0.10	42	9	42
483	2	3	641	6.8	2.10	1.10	0.10	0.05	34	7	34
484	2	3	645	6.7	1.60	1.10	0.20	0.10	42	10	42
485	2	3	646	5.0	1.50	0.70	0.15	0.05	32	18	32
486	2	3	647	5.8	1.05	1.00	0.10	0.05	32	6	32
487	2	3	649	5.4	1.55	0.70	0.20	0.10	32	11	32
488	2	3	650	7.1	1.50	1.10	0.20	0.10	37	16	37
489	2	3	651	6.4	1.70	0.60	0.10	0.05	37	11	37
490	2	3	652	6.0	1.50	1.00	0.20	0.10	35	12	35
491	2	3	653	5.3	1.50	0.60	0.10	0.05	35	12	35
492	2	3	654	5.9	1.90	0.55	0.10	0.05	33	13	33
493	2	3	655	8.6	2.10	1.00	0.20	0.10	43	9	43
494	2	3	656	6.6	1.50	1.00	0.15	0.05	37	17	37
495	2	3	657	7.5	1.50	1.10	0.20	0.10	42	11	42
496	2	3	658	7.0	1.70	1.20	0.25	0.10	40	11	40
497	2	3	659	6.8	1.60	1.00	0.15	0.05	37	17	37
498	2	3	660	6.7	1.00	1.50	0.30	0.15	41	17	41
499	2	3	661	6.4	1.60	1.30	0.35	0.20	41	15	41
500	2	3	662	6.2	1.35	1.00	0.20	0.10	37	16	37

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501	2	3	663	5.6	1.55	0.70	0.10	0.05	37	21	37
502	2	3	664	6.3	1.60	1.20	0.15	0.05	39	12	39
503	2	3	666	6.2	1.50	1.30	0.30	0.15	37	13	37
504	2	3	667	6.0	1.50	1.10	0.20	0.10	32	8	32
505	2	3	668	5.6	1.30	1.25	0.25	0.10	40	14	40
506	2	3	669	5.6	1.55	0.80	0.20	0.10	40	21	40
507	2	3	670	6.4	1.35	1.45	0.30	0.15	40	16	40
508	2	3	671	5.1	1.60	0.55	0.10	0.05	34	19	34
509	2	3	672	6.4	1.65	1.05	0.25	0.10	37	13	37
510	2	3	673	6.5	1.60	1.20	0.25	0.10	40	22	40
511	2	3	674	7.1	1.60	1.45	0.30	0.15	40	10	40
512	2	3	676	6.7	2.00	1.40	0.25	0.10	38	17	38
513	2	3	680	6.8	1.65	1.05	0.20	0.10	39	10	39
514	2	3	686	4.0	0.90	1.10	0.20	0.10	30	14	30
515	2	3	688	6.4	1.20	1.20	0.20	0.10	34	14	34
516	2	3	696	5.4	1.25	0.80	0.20	0.10	38	13	38
517	2	3	697	5.7	1.90	0.80	0.20	0.10	34	16	34
518	2	3	699	6.0	1.80	0.90	0.15	0.05	34	16	34
519	2	3	700	7.7	2.00	1.50	0.30	0.15	40	9	40
520	2	3	702	5.6	1.35	0.75	0.20	0.10	32	7	32
521	2	3	703	6.9	1.45	1.45	0.20	0.10	35	10	35
522	2	3	705	6.5	1.30	1.30	0.25	0.10	43	16	43
523	2	3	706	6.3	2.15	0.80	0.20	0.10	34	14	34
524	2	3	712	5.8	1.05	1.05	0.20	0.10	32	12	32
525	2	3	713	5.2	1.40	0.90	0.25	0.10	37	21	37
526	2	3	714	6.3	1.40	1.35	0.15	0.05	37	20	37
527	2	3	715	6.1	1.15	0.95	0.25	0.10	39	14	39
528	2	3	716	5.6	1.35	1.10	0.25	0.10	32	12	32
529	2	3	717	7.0	1.55	1.00	0.20	0.10	35	15	35
530	2	3	718	5.7	1.50	0.85	0.20	0.10	37	16	37
531	2	3	719	6.1	1.80	1.00	0.20	0.10	35	19	35
532	2	3	721	7.6	1.65	1.35	0.20	0.10	41	16	41
533	2	3	723	7.8	1.95	1.60	0.20	0.10	42	14	42
534	2	3	724	8.3	2.20	1.20	0.25	0.10	47	14	47
535	2	3	726	5.2	0.80	1.40	0.20	0.10	31	7	31
536	2	3	727	5.1	1.65	0.60	0.10	0.05	36	20	36
537	2	3	730	8.6	2.30	1.25	0.30	0.15	40	11	40
538	2	3	731	7.8	1.45	1.50	0.25	0.10	37	9	37
539	2	3	733	5.2	1.30	0.95	0.25	0.15	28	11	28
540	2	3	734	7.0	1.80	1.15	0.30	0.15	32	6	32
541	2	3	737	6.4	1.40	1.20	0.20	0.10	36	19	36
542	2	3	739	7.1	1.00	2.15	0.40	0.20	37	7	37
543	2	3	740	4.0	1.40	0.55	0.15	0.05	27	13	27
544	2	4	742	3.6	0.95	0.85	0.30	0.10	28	11	28
545	2	4	744	5.6	1.00	1.55	0.40	0.20	36	14	36
546	2	4	745	5.5	1.05	1.55	0.40	0.20	34	7	34
547	2	4	746	4.7	1.15	1.25	0.30	0.15	31	12	31
548	2	4	747	6.3	1.60	1.15	0.15	0.05	35	12	35
549	2	4	748	7.9	2.35	1.15	0.20	0.10	38	21	38
550	2	4	749	4.8	0.90	0.90	0.10	0.05	32	14	32

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551	2	4	751	5.8	1.60	0.90	0.25	0.10	39	9	39
552	2	4	753	4.9	1.10	0.95	0.25	0.15	33	13	33
553	2	4	754	5.2	1.15	1.25	0.35	0.20	33	10	33
554	2	4	756	4.5	1.10	0.70	0.10	0.05	30	10	30
555	2	4	757	5.9	1.45	1.20	0.15	0.05	37	9	37
556	2	4	758	4.8	1.40	0.65	0.10	0.05	33	15	33
557	2	4	759	4.8	1.00	0.90	0.20	0.10	37	20	37
558	2	4	760	4.6	0.90	1.00	0.20	0.10	35	12	35
559	2	4	761	5.5	1.25	1.20	0.25	0.10	35	13	35
560	2	4	766	5.1	1.10	1.00	0.20	0.10	35	18	35
561	2	4	767	5.9	1.50	1.20	0.30	0.15	40	13	40
562	2	4	768	5.2	1.00	1.00	0.10	0.05	31	14	31
563	2	4	769	5.1	1.35	0.80	0.25	0.10	37	16	37
564	2	4	770	4.9	1.30	0.70	0.15	0.05	29	14	29
565	2	4	771	4.9	1.15	1.05	0.20	0.10	35	18	35
566	2	4	772	5.7	1.60	0.95	0.05	0.05	33	12	33
567	2	4	773	6.1	1.40	1.15	0.30	0.15	35	12	35
568	2	4	774	4.5	1.20	0.90	0.15	0.05	30	10	30
569	2	4	775	6.1	1.70	1.05	0.20	0.10	36	17	36
570	2	4	776	4.4	1.00	1.10	0.20	0.10	29	15	29
571	2	4	778	4.2	1.35	0.80	0.20	0.10	31	9	31
572	2	4	779	6.8	2.00	1.75	0.40	0.20	37	11	37
573	2	4	783	4.3	1.15	0.70	0.25	0.10	30	12	30
574	2	4	784	5.7	1.35	1.10	0.20	0.10	35	11	35
575	2	4	786	4.7	1.15	0.80	0.15	0.05	30	9	30
576	2	4	787	4.5	0.90	0.95	0.20	0.10	30	9	30
577	2	4	789	5.6	1.10	0.80	0.15	0.05	37	14	37
578	2	4	790	4.9	1.35	0.65	0.20	0.10	34	11	34
579	2	4	791	6.0	1.60	1.05	0.20	0.10	36	18	36
580	2	4	792	6.2	2.20	1.20	0.30	0.15	37	10	37
581	2	4	793	6.5	1.85	1.10	0.25	0.10	35	9	35
582	2	4	794	4.9	1.30	1.00	0.20	0.10	33	13	33
583	2	4	795	6.4	1.50	1.25	0.30	0.15	34	15	34
584	2	4	796	4.6	1.20	0.80	0.25	0.10	31	14	31
585	2	4	797	5.6	1.50	1.90	0.35	0.15	38	12	38
586	2	4	798	4.5	0.90	0.90	0.10	0.05	33	16	33
587	2	4	800	3.5	1.05	0.70	0.10	0.05	24	10	24
588	2	4	801	4.8	1.15	1.05	0.25	0.10	32	8	32
589	2	4	803	4.2	0.90	1.10	0.20	0.10	29	9	29
590	2	4	806	4.4	0.90	0.85	0.15	0.05	31	11	31
591	2	4	808	-5.0	1.25	1.00	0.25	0.10	34	20	34
592	2	4	810	4.4	1.00	1.35	0.30	0.15	30	14	30
593	2	4	811	4.7	1.30	0.55	0.20	0.10	32	16	32
594	2	4	815	6.0	1.50	1.25	0.15	0.05	36	12	36
595	2	4	816	4.5	1.15	0.80	0.10	0.05	33	6	33
596	2	4	818	5.4	1.50	0.80	0.15	0.05	39	11	39
597	2	4	819	6.3	1.50	0.80	0.30	0.15	39	12	39
598	2	4	821	6.4	1.40	1.05	0.20	0.10	36	10	36
599	2	4	822	6.8	0.80	1.85	0.30	0.15	40	14	40
600	2	4	824	5.2	1.25	1.05	0.15	0.05	32	17	32

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601	2	4	825	4.4	1.10	1.20	0.25	0.10	34	19	34
602	2	4	826	5.5	1.60	1.00	0.30	0.15	36	16	36
603	2	4	827	5.4	1.30	1.30	0.25	0.10	35	14	35
604	2	4	828	5.4	1.10	1.05	0.30	0.15	40	14	40
605	2	4	829	5.6	1.30	1.25	0.20	0.10	34	7	34
606	2	4	830	6.5	1.05	1.50	0.30	0.15	37	16	37
607	2	4	831	4.6	1.50	0.40	0.10	0.05	29	15	29
608	2	4	832	4.8	1.10	0.90	0.20	0.10	32	12	32
609	2	4	833	5.2	1.30	1.55	0.45	0.20	31	10	31
610	2	4	834	5.1	1.20	1.05	0.20	0.10	34	12	34
611	2	4	835	6.1	1.50	0.75	0.15	0.05	34	8	34
612	2	4	836	4.8	1.10	0.90	0.20	0.10	35	9	35
613	2	4	838	5.7	1.10	1.50	0.25	0.10	29	15	29
614	2	4	839	7.3	2.00	1.05	0.20	0.10	38	12	38
615	2	4	840	4.5	1.15	1.05	0.25	0.10	29	11	29
616	2	4	841	4.7	1.50	1.05	0.15	0.05	30	11	30
617	2	4	842	7.7	1.50	0.60	0.20	0.10	40	12	40
618	2	4	843	4.4	1.00	0.80	0.20	0.10	30	11	30
619	2	4	844	3.9	1.10	0.75	0.10	0.05	30	16	30
620	2	4	846	4.8	0.80	0.80	0.20	0.10	34	19	34
621	3	1	1	5.9	0.60	1.80	0.40	0.20	33	9	33
622	3	1	3	6.2	1.25	1.70	0.40	0.15	37	8	37
623	3	1	4	6.5	0.80	1.80	0.30	0.15	32	6	32
624	3	1	5	8.3	1.70	2.60	0.70	0.30	37	7	37
625	3	1	6	5.7	0.60	1.50	0.40	0.15	28	6	28
626	3	1	7	6.8	0.70	1.95	0.50	0.25	35	7	35
627	3	1	8	4.0	0.60	1.00	0.40	0.15	24	5	24
628	3	1	10	6.0	0.80	1.80	0.70	0.30	31	6	31
629	3	1	11	7.0	0.75	2.05	0.60	0.30	33	6	33
630	3	1	12	9.6	1.30	3.20	0.90	0.45	32	4	32
631	3	1	13	6.9	0.60	2.70	0.80	0.40	36	7	36
632	3	1	14	7.9	0.75	2.65	0.90	0.50	32	3	32
633	3	1	15	4.5	0.65	1.45	0.45	0.20	26	7	26
634	3	1	16	4.7	0.60	1.60	0.50	0.25	31	5	31
635	3	1	17	8.0	1.95	1.20	0.30	0.15	39	9	39
636	3	1	18	8.0	0.80	2.70	0.85	0.40	37	5	37
637	3	1	20	7.0	0.85	1.90	0.65	0.35	34	6	34
638	3	1	21	2.5	0.25	1.05	0.55	0.25	23	3	23
639	3	1	22	3.0	0.30	0.75	0.35	0.10	22	6	22
640	3	1	23	3.2	0.45	1.10	0.60	0.30	20	4	20
641	3	1	24	5.5	0.90	1.65	0.65	0.30	26	3	26
642	3	1	25	5.0	0.20	1.85	0.60	0.30	24	3	24
643	3	1	26	3.9	0.40	1.25	0.60	0.30	22	4	22
644	3	1	27	2.8	0.15	1.20	0.60	0.30	18	3	18
645	3	1	28	2.5	0.50	0.80	0.55	0.30	16	4	16
646	3	1	29	5.5	0.65	1.70	0.85	0.45	27	5	27
647	3	1	30	2.1	0.25	0.95	0.60	0.30	14	3	14
648	3	1	32	4.2	0.55	1.15	0.60	0.30	24	3	24
649	3	1	34	3.0	0.20	0.80	0.50	0.30	19	3	19
650	3	1	35	2.8	0.15	1.20	0.60	0.30	18	6	18

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651	3	1	36	3.9	0.25	1.55	0.80	0.35	23	4	23
652	3	1	37	2.6	0.00	1.15	0.55	0.30	19	4	19
653	3	1	38	3.8	0.30	1.40	0.80	0.40	23	4	23
654	3	1	39	5.0	0.70	1.80	0.90	0.40	24	3	24
655	3	1	40	3.7	0.30	1.50	0.65	0.35	23	5	23
656	3	1	41	3.9	0.25	1.75	0.90	0.40	20	4	20
657	3	1	42	3.6	0.25	1.60	0.95	0.45	18	5	18
658	3	1	43	7.8	0.65	2.15	0.50	0.30	39	5	39
659	3	1	44	7.4	0.75	3.00	0.85	0.45	35	4	35
660	3	1	45	8.5	0.80	2.70	0.65	0.30	38	4	38
661	3	1	46	4.5	0.40	1.50	0.50	0.20	28	5	28
662	3	1	47	1.5	0.05	0.85	0.65	0.35	12	3	12
663	3	1	49	2.2	0.30	0.90	0.60	0.30	18	4	18
664	3	1	50	5.6	0.80	1.00	0.60	0.30	25	5	25
665	3	1	51	4.2	0.35	1.45	0.60	0.30	24	4	24
666	3	1	52	3.3	0.20	1.00	0.50	0.25	21	4	21
667	3	1	53	2.9	0.30	0.80	0.55	0.35	20	3	20
668	3	1	54	3.0	0.40	1.15	0.60	0.30	22	4	22
669	3	1	56	2.6	0.20	0.80	0.50	0.25	17	3	17
670	3	1	57	4.2	0.30	1.50	0.60	0.30	23	3	23
671	3	1	58	8.8	1.30	3.30	0.80	0.35	35	4	35
672	3	1	59	4.8	0.45	1.25	0.40	0.20	24	4	24
673	3	1	60	7.1	1.05	1.60	0.35	0.15	31	6	31
674	3	1	61	3.5	0.30	1.30	0.50	0.25	20	4	20
675	3	1	62	4.9	0.35	1.70	0.70	0.30	23	4	23
676	3	1	63	4.4	0.30	1.40	0.65	0.35	24	4	24
677	3	1	65	2.2	0.35	0.85	0.45	0.20	16	3	16
678	3	1	66	3.6	0.20	1.40	0.90	0.40	22	2	22
679	3	1	67	4.2	0.20	1.70	0.75	0.35	20	2	20
680	3	1	68	4.4	0.65	1.50	0.75	0.35	22	4	22
681	3	1	69	4.4	0.60	1.30	0.45	0.20	28	5	28
682	3	2	70	3.6	0.30	1.50	1.15	0.70	19	2	19
683	3	2	71	2.2	0.10	1.00	0.80	0.40	14	3	14
684	3	2	72	4.7	0.70	1.45	0.95	0.45	20	3	20
685	3	2	73	2.3	0.15	1.25	0.85	0.35	14	2	14
686	3	2	74	2.0	0.10	0.90	0.60	0.30	15	4	15
687	3	2	75	2.7	0.20	1.15	0.90	0.45	16	1	16
688	3	2	76	5.4	0.75	1.80	1.10	0.50	26	1	26
689	3	2	77	3.6	0.30	1.35	0.95	0.45	16	3	16
690	3	2	78	7.3	1.00	2.15	0.75	0.35	29	5	29
691	3	2	79	3.2	0.35	1.05	0.70	0.30	18	3	18
692	3	2	80	4.5	0.45	1.65	0.85	0.40	25	3	25
693	3	2	81	2.0	0.10	1.35	0.80	0.35	13	3	13
694	3	2	82	2.5	0.10	1.15	0.30	0.75	19	4	19
695	3	2	83	5.6	0.85	1.85	1.15	0.55	23	3	23
696	3	2	84	1.3	0.10	0.65	0.65	0.30	12	1	12
697	3	2	85	5.6	0.40	2.25	1.15	0.50	25	3	25
698	3	2	86	7.3	1.00	2.40	0.75	0.35	36	9	36
699	3	2	87	7.0	1.30	1.75	0.55	0.25	37	12	37
700	3	2	88	1.8	0.00	0.90	0.55	0.30	15	2	15

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701	3	2	89	7.4	1.40	2.45	0.80	0.45	40	9	40
702	3	2	90	3.4	0.40	1.35	0.75	0.25	26	4	26
703	3	2	91	7.0	1.05	2.25	0.70	0.30	37	6	37
704	3	2	92	2.0	0.10	1.05	0.90	0.40	14	2	14
705	3	2	93	1.3	0.00	0.75	0.65	0.30	12	2	12
706	3	2	94	4.1	0.50	1.35	1.00	0.50	20	5	20
707	3	2	95	3.8	0.40	1.55	0.90	0.35	21	3	21
708	3	2	96	8.2	1.55	2.30	0.80	0.35	32	6	32
709	3	2	98	7.0	0.90	2.15	0.55	0.25	29	2	29
710	3	2	99	6.6	0.95	1.75	0.45	0.25	36	6	36
711	3	2	100	5.6	1.05	1.35	0.45	0.20	27	7	27
712	3	2	101	7.9	1.35	2.45	0.90	0.50	36	7	36
713	3	2	103	8.8	1.50	2.45	0.70	0.35	37	5	37
714	3	2	104	3.3	0.45	1.10	0.60	0.30	20	3	20
715	3	2	105	1.2	0.00	0.60	0.60	0.35	10	1	10
716	3	2	106	1.5	0.00	0.75	0.75	0.35	10	2	10
717	3	2	107	7.0	1.20	2.05	0.60	0.30	31	5	31
718	3	2	108	8.4	1.70	2.75	0.85	0.45	38	6	38
719	3	2	109	7.7	1.05	1.85	0.60	0.30	34	5	34
720	3	2	110	4.1	0.50	1.70	0.65	0.35	29	5	29
721	3	2	111	1.4	0.10	0.55	0.65	0.25	10	2	10
722	3	2	112	1.3	0.05	0.60	0.60	0.25	10	1	10
723	3	2	113	6.1	1.00	1.70	1.10	0.55	30	2	30
724	3	2	114	2.6	0.35	1.05	0.80	0.40	17	3	17
725	3	2	115	2.7	0.10	1.25	0.85	0.45	18	2	18
726	3	2	116	2.3	0.25	0.80	1.05	0.55	15	2	15
727	3	2	117	2.0	0.15	0.85	0.70	0.30	16	2	16
728	3	2	118	8.3	1.25	2.50	0.65	0.30	36	6	36
729	3	2	119	1.5	0.10	0.65	0.75	0.35	12	2	12
730	3	2	120	1.7	0.10	0.70	0.40	0.20	14	4	14
731	3	2	121	1.3	0.15	0.70	0.70	0.40	14	2	14
732	3	2	122	4.7	0.95	1.25	0.40	0.20	27	7	27
733	3	2	123	6.3	0.95	1.85	0.60	0.35	33	6	33
734	3	2	124	6.3	0.85	2.10	0.80	0.45	35	7	35
735	3	2	125	2.6	0.25	1.10	0.55	0.30	22	5	22
736	3	2	126	5.2	0.75	1.80	0.55	0.30	34	11	34
737	3	2	127	5.4	1.05	1.75	0.60	0.25	27	6	27
738	3	2	128	3.2	0.55	1.25	0.30	0.15	25	10	25
739	3	2	129	4.8	0.80	1.35	0.45	0.20	27	6	27
740	3	2	130	6.4	0.85	2.00	0.80	0.40	28	7	28
741	3	2	131	2.1	0.10	1.00	0.70	0.40	15	3	15
742	3	2	132	8.6	1.10	3.10	0.75	0.30	34	2	34
743	3	2	133	7.7	1.65	1.35	0.70	0.30	33	4	33
744	3	2	134	7.6	1.10	1.65	0.50	0.25	31	4	31
745	3	2	135	6.4	1.20	1.95	0.45	0.20	30	5	30
746	3	2	136	7.2	1.45	2.05	0.65	0.30	38	6	38
747	3	2	137	6.7	0.95	2.00	0.50	0.25	31	6	31
748	3	2	138	3.7	0.65	1.35	0.60	0.30	25	3	25
749	3	2	139	6.0	0.60	2.15	0.45	0.20	33	7	33
750	3	2	140	4.6	0.65	1.35	0.40	0.25	30	8	30

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
751	3	2	141	6.7	1.45	1.40	0.55	0.25	37	7	37
752	3	2	142	4.3	0.70	1.30	0.35	0.20	29	7	29
753	3	2	143	5.4	0.80	1.60	0.40	0.20	34	7	34
754	3	2	144	6.5	1.00	2.05	0.55	0.25	33	6	33
755	3	2	145	6.0	0.95	1.70	0.50	0.25	41	9	41
756	3	2	146	6.3	1.25	1.70	0.50	0.25	34	7	34
757	3	2	147	4.0	0.65	1.20	0.35	0.15	28	8	28
758	3	2	148	5.3	0.95	1.40	0.60	0.30	31	4	31
759	3	2	149	2.0	0.35	0.65	0.45	0.20	16	4	16
760	3	2	150	4.9	0.75	1.50	0.55	0.30	26	4	26
761	3	2	151	8.0	1.55	1.90	0.60	0.25	37	10	37
762	3	2	152	5.5	0.95	1.60	0.55	0.25	31	5	31
763	3	2	153	2.6	0.45	0.80	0.45	0.20	23	5	23
764	3	2	154	7.1	1.20	1.90	0.75	0.40	36	4	36
765	3	2	155	5.0	0.50	2.00	0.60	0.25	29	5	29
766	3	2	156	4.8	0.70	1.50	0.55	0.25	28	6	28
767	3	2	157	5.0	1.00	1.55	0.60	0.30	31	6	31
768	3	2	158	6.9	0.90	2.20	0.70	0.35	32	8	32
769	3	2	159	4.7	0.60	1.30	0.45	0.25	29	9	29
770	3	2	160	2.3	0.15	1.05	0.50	0.25	17	3	17
771	3	2	161	6.4	1.30	1.70	0.60	0.30	35	7	35
772	3	2	162	4.8	0.60	1.45	0.45	0.25	29	8	29
773	3	2	163	2.3	0.15	1.00	0.45	0.20	17	4	17
774	3	2	164	4.7	0.90	1.45	0.45	0.20	32	13	32
775	3	2	165	5.8	0.75	1.80	0.50	0.25	36	6	36
776	3	2	166	6.5	0.85	1.95	0.40	0.20	36	7	36
777	3	2	167	5.3	0.65	2.05	0.55	0.25	33	9	33
778	3	2	168	7.3	1.00	2.10	0.50	0.25	35	5	35
779	3	2	169	5.9	1.20	1.45	0.40	0.20	32	8	32
780	3	2	170	7.1	1.25	2.00	0.40	0.15	36	9	36
781	3	2	171	3.9	0.35	1.15	0.30	0.15	25	7	25
782	3	2	172	6.4	0.55	1.95	0.30	0.15	38	11	38
783	3	2	173	6.9	0.95	1.95	0.60	0.30	39	8	39
784	3	2	174	6.0	0.90	1.85	0.45	0.25	33	9	33
785	3	2	175	7.3	0.75	2.05	0.45	0.20	37	8	37
786	3	3	177	4.8	0.65	1.50	1.00	0.50	21	3	21
787	3	3	180	4.8	0.45	1.50	0.70	0.35	23	4	23
788	3	3	181	2.7	0.30	0.95	0.55	0.30	18	4	18
789	3	3	182	3.0	0.35	0.90	0.55	0.30	19	3	19
790	3	3	183	3.2	0.55	1.00	0.60	0.30	21	6	21
791	3	3	184	3.0	0.45	1.10	0.60	0.30	23	6	23
792	3	3	186	2.4	0.20	0.85	0.35	0.15	20	4	20
793	3	3	187	3.3	0.35	1.30	0.60	0.30	24	4	24
794	3	3	188	7.8	1.15	2.25	0.65	0.30	36	6	36
795	3	3	189	4.5	0.45	1.50	0.65	0.35	24	4	24
796	3	3	190	4.5	0.50	1.65	0.75	0.40	27	3	27
797	3	3	193	5.4	0.90	1.30	0.40	0.20	27	7	27
798	3	3	194	7.6	1.70	1.60	0.85	0.50	36	7	36
799	3	3	195	3.2	0.15	1.35	0.90	0.45	19	3	19
800	3	3	197	4.0	0.10	1.50	0.85	0.45	20	3	20

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
801	3	3	198	4.5	1.00	1.15	0.45	0.20	21	5	21
802	3	3	200	2.6	0.25	1.05	0.60	0.30	18	4	18
803	3	3	202	2.7	0.40	0.75	0.40	0.20	17	4	17
804	3	3	203	3.9	0.60	1.40	0.90	0.50	24	4	24
805	3	3	204	4.4	0.60	1.40	0.90	0.40	22	4	22
806	3	3	205	2.4	0.20	0.95	0.60	0.30	17	3	17
807	3	3	206	4.8	0.50	1.60	0.80	0.55	26	2	26
808	3	3	207	4.2	0.40	1.50	0.60	0.30	29	5	29
809	3	3	208	5.2	0.65	1.30	0.65	0.30	33	4	33
810	3	3	209	5.8	0.60	2.10	0.80	0.35	27	4	27
811	3	3	210	2.4	0.35	0.90	0.55	0.30	16	3	16
812	3	3	211	4.7	0.70	1.80	0.70	0.30	22	3	22
813	3	3	213	4.7	0.60	1.75	0.80	0.35	26	4	26
814	3	3	214	5.6	0.70	1.60	0.70	0.30	32	6	32
815	3	3	215	8.0	1.85	1.90	0.55	0.25	39	8	39
816	3	3	216	4.8	0.50	1.50	0.60	0.30	28	3	28
817	3	3	217	2.7	0.10	1.25	0.75	0.40	16	2	16
818	3	3	219	5.7	0.90	1.60	0.70	0.40	32	6	32
819	3	3	220	4.4	0.70	1.35	0.40	0.20	30	7	30
820	3	3	221	4.1	0.15	1.65	0.40	0.20	29	6	29
821	3	3	222	8.3	2.10	2.10	0.70	0.40	40	4	40
822	3	3	223	6.8	0.95	1.90	0.70	0.35	41	11	41
823	3	3	224	7.3	0.70	2.80	0.80	0.45	34	3	34
824	3	3	227	7.2	0.80	2.20	0.50	0.25	39	3	39
825	3	3	228	4.1	0.30	1.50	0.60	0.40	29	4	29
826	3	3	229	7.4	0.60	2.80	0.75	0.35	40	4	40
827	3	3	232	2.8	0.35	1.35	0.70	0.35	20	4	20
828	3	3	233	2.9	0.35	1.00	0.60	0.25	20	4	20
829	3	3	234	3.1	0.30	1.00	0.55	0.30	19	3	19
830	3	3	235	3.6	0.30	1.30	0.50	0.25	22	4	22
831	3	3	236	4.4	0.65	1.40	0.60	0.25	22	4	22
832	3	3	237	4.6	0.80	1.05	0.40	0.20	27	5	27
833	3	3	238	5.0	0.85	1.50	0.70	0.40	25	5	25
834	3	3	239	4.2	0.35	1.60	0.60	0.30	23	4	23
835	3	3	240	4.0	0.60	1.20	0.60	0.30	25	6	25
836	3	3	241	2.5	0.25	0.85	0.55	0.25	20	4	20
837	3	3	242	3.7	0.60	1.05	0.40	0.20	24	5	24
838	3	3	243	3.5	0.25	1.05	0.55	0.25	19	4	19
839	3	3	244	5.1	0.55	1.45	0.60	0.30	29	5	29
840	3	3	245	7.4	1.00	2.10	0.55	0.25	35	5	35
841	3	3	246	7.0	1.00	2.00	0.60	0.20	37	5	37
842	3	3	247	6.2	0.65	2.00	0.60	0.30	35	4	35
843	3	3	248	4.8	0.70	1.30	0.60	0.30	31	5	31
844	3	3	250	4.9	0.50	1.90	0.70	0.25	23	3	23
845	3	3	251	3.9	0.50	1.20	0.70	0.40	19	5	19
846	3	3	253	4.4	0.75	1.20	0.60	0.30	21	3	21
847	3	3	254	2.9	0.45	1.05	0.60	0.30	20	4	20
848	3	3	255	2.8	0.35	1.00	0.50	0.25	19	5	19
849	3	3	257	3.5	0.50	1.15	0.70	0.40	20	3	20
850	3	3	259	3.3	0.50	1.00	0.70	0.50	19	4	19

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851	3	3	260	2.6	0.40	0.80	0.50	0.25	15	3	15
852	3	3	261	4.6	0.65	1.35	0.70	0.35	24	4	24
853	3	3	262	2.7	0.10	1.20	0.50	0.30	18	4	18
854	3	3	263	6.5	1.15	1.50	0.50	0.25	31	5	31
855	3	3	264	3.1	0.50	1.05	0.40	0.20	25	4	25
856	3	3	265	5.5	0.60	1.90	0.60	0.35	31	6	31
857	3	3	266	7.8	1.00	2.40	0.60	0.30	31	7	31
858	3	4	267	3.9	0.40	1.15	0.40	0.20	29	5	29
859	3	4	268	5.5	1.35	1.05	0.40	0.20	30	10	30
860	3	4	269	5.4	0.60	1.95	0.45	0.20	32	7	32
861	3	4	270	7.5	1.95	1.60	0.60	0.30	35	6	35
862	3	4	271	4.6	0.70	1.35	0.50	0.25	29	4	29
863	3	4	272	4.7	1.00	1.30	0.40	0.20	30	9	30
864	3	4	273	6.7	0.90	2.15	0.55	0.30	35	7	35
865	3	4	274	7.8	1.40	2.25	0.65	0.35	38	4	38
866	3	4	276	7.6	1.25	1.70	0.50	0.30	37	4	37
867	3	4	277	2.5	0.50	0.90	0.65	0.30	22	4	22
868	3	4	278	1.8	0.00	0.80	0.60	0.30	13	2	13
869	3	4	279	1.9	0.20	0.80	0.45	0.20	16	3	16
870	3	4	280	5.1	0.50	1.90	0.50	0.25	23	3	23
871	3	4	281	2.9	0.30	0.95	0.55	0.20	21	3	21
872	3	4	282	4.3	0.70	1.30	0.60	0.30	26	4	26
873	3	4	283	5.5	0.60	2.20	0.65	0.30	26	4	26
874	3	4	284	8.8	1.10	2.45	0.55	0.25	34	2	34
875	3	4	285	7.3	0.70	2.65	0.65	0.25	32	3	32
876	3	4	286	2.4	0.25	0.80	0.65	0.30	17	3	17
877	3	4	287	4.7	0.45	2.05	0.60	0.30	25	4	25
878	3	4	288	4.3	0.65	1.35	0.50	0.25	24	4	24
879	3	4	289	3.9	0.55	1.20	0.65	0.35	23	3	23
880	3	4	290	2.9	0.20	1.00	0.70	0.45	18	3	18
881	3	4	291	5.3	0.70	1.50	0.65	0.30	30	4	30
882	3	4	292	6.9	0.70	2.25	0.60	0.30	29	6	29
883	3	4	293	6.0	0.70	2.25	0.60	0.30	36	7	36
884	3	4	294	4.0	0.40	1.80	0.85	0.40	26	4	26
885	3	4	295	2.8	0.10	1.10	0.70	0.35	18	4	18
886	3	4	296	4.4	0.60	1.35	0.55	0.30	27	6	27
887	3	4	297	4.0	0.25	1.15	0.55	0.25	19	4	19
888	3	4	298	2.8	0.40	0.95	0.80	0.35	20	3	20
889	3	4	299	3.9	0.25	1.30	0.65	0.30	19	3	19
890	3	4	300	3.3	0.30	1.20	0.60	0.30	20	3	20
891	3	4	301	2.1	0.20	0.85	0.55	0.25	15	4	15
892	3	4	302	1.9	0.15	0.75	0.45	0.20	17	5	17
893	3	4	303	4.7	0.50	1.40	0.65	0.35	25	4	25
894	3	4	304	5.1	0.50	1.80	0.60	0.30	27	5	27
895	3	4	306	5.3	0.90	0.80	0.45	0.25	30	5	30
896	3	4	307	7.7	1.30	1.75	0.45	0.20	35	5	35
897	3	4	308	2.7	0.35	0.90	0.40	0.25	23	4	23
898	3	4	309	4.2	0.60	1.50	0.65	0.30	28	5	28
899	3	4	310	2.9	0.30	1.10	0.55	0.25	20	2	20
900	3	4	311	8.1	0.20	3.80	0.70	0.30	31	3	31

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901	3	4	312	2.5	0.35	0.95	0.75	0.30	16	2	16
902	3	4	313	6.4	0.85	2.15	0.60	0.25	29	3	29
903	3	4	314	8.2	1.55	1.95	0.60	0.30	38	6	38
904	3	4	315	2.8	0.30	1.05	0.60	0.30	21	4	21
905	3	4	316	4.5	0.50	1.85	0.70	0.30	23	4	23
906	3	4	317	4.1	0.50	1.40	0.75	0.35	27	4	27
907	3	4	318	6.9	0.85	2.90	0.85	0.40	36	3	36
908	3	4	319	5.7	0.60	1.95	0.65	0.35	29	5	29
909	3	4	320	5.3	0.70	2.05	0.90	0.45	29	4	29
910	3	4	321	5.0	0.50	1.85	0.55	0.25	29	4	29
911	3	4	322	4.5	0.80	1.15	0.55	0.30	26	3	26
912	3	4	323	4.2	0.65	1.15	0.40	0.20	21	4	21
913	3	4	324	2.4	0.15	0.90	0.45	0.25	18	4	18
914	3	4	325	6.6	1.15	2.60	0.85	0.55	35	5	35
915	3	4	326	5.0	0.10	2.05	0.50	0.30	36	5	36
916	3	4	327	4.7	0.65	1.35	0.55	0.30	30	9	30
917	3	4	328	4.3	0.80	0.95	0.45	0.30	32	8	32
918	3	4	329	7.6	1.05	2.25	0.75	0.40	32	4	32
919	3	4	330	6.2	0.65	2.30	0.95	0.50	33	4	33
920	3	4	331	2.3	0.10	0.80	0.55	0.25	17	3	17
921	3	4	332	1.7	0.05	0.80	0.55	0.25	13	2	13
922	3	4	333	4.8	0.35	2.10	0.80	0.45	27	3	27
923	3	4	334	3.5	0.20	1.45	0.80	0.40	23	4	23
924	3	4	335	3.9	0.40	1.40	0.60	0.25	26	6	26
925	3	4	336	5.1	0.70	2.10	0.95	0.45	25	5	25
926	3	4	337	10.1	1.40	2.50	0.90	0.40	40	4	40
927	3	4	338	5.1	0.20	2.05	0.80	0.40	26	4	26
928	3	4	339	5.0	0.95	1.65	0.60	0.30	29	4	29
929	3	4	340	2.8	0.45	0.80	0.40	0.20	21	5	21
930	3	4	341	6.1	0.80	1.90	0.60	0.30	34	9	34
931	3	5	342	5.6	0.30	1.20	0.55	0.30	26	4	26
932	3	5	343	5.5	0.50	2.00	0.65	0.30	27	4	27
933	3	5	344	5.0	0.40	1.75	0.60	0.35	24	1	24
934	3	5	345	8.2	0.65	3.60	0.75	0.20	35	4	35
935	3	5	346	3.9	0.45	1.40	0.60	0.35	27	4	27
936	3	5	347	4.2	0.50	1.00	0.30	0.15	26	4	26
937	3	5	348	5.3	0.55	1.90	1.10	0.60	31	4	31
938	3	5	349	2.9	0.10	1.10	0.60	0.30	16	2	16
939	3	5	350	5.1	0.75	1.50	0.75	0.40	29	5	29
940	3	5	351	2.7	0.30	0.95	0.50	0.25	19	3	19
941	3	5	352	2.1	0.15	0.75	0.65	0.30	16	3	16
942	3	5	353	2.0	0.00	0.75	0.70	0.35	13	4	13
943	3	5	354	1.3	0.00	0.55	0.70	0.35	9	2	9
944	3	5	355	3.6	0.35	1.65	0.80	0.50	17	3	17
945	3	5	356	2.5	0.10	1.25	0.60	0.30	15	3	15
946	3	5	357	4.7	0.40	1.75	0.95	0.50	22	4	22
947	3	5	358	1.9	0.15	0.70	0.50	0.30	14	2	14
948	3	5	359	1.0	0.15	0.50	0.75	0.40	9	1	9
949	3	5	360	2.4	0.10	1.00	0.75	0.40	17	3	17
950	3	5	361	2.0	0.10	0.80	0.70	0.40	13	2	13

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
951	3	5	362	4.0	0.55	1.40	0.60	0.25	22	4	22
952	3	5	363	5.0	0.50	2.00	1.10	0.60	26	3	26
953	3	5	364	5.9	0.70	1.70	0.70	0.35	30	3	30
954	3	5	365	4.3	0.50	1.20	0.60	0.30	22	3	22
955	3	5	366	4.7	0.65	1.85	0.80	0.35	29	6	29
956	3	5	367	6.1	0.50	2.10	0.70	0.25	32	2	32
957	3	5	368	6.2	0.70	2.20	0.90	0.45	27	5	27
958	3	5	369	1.6	0.30	0.65	0.50	0.20	15	3	15
959	3	5	370	6.3	1.10	1.20	0.60	0.30	33	2	33
960	3	5	371	4.2	0.30	1.40	0.60	0.25	24	4	24
961	3	5	372	4.3	0.30	1.45	0.70	0.40	25	3	25
962	3	5	373	3.8	0.20	1.40	0.60	0.30	20	3	20
963	3	5	374	4.8	0.90	1.50	1.00	0.50	23	4	23
964	3	5	375	5.6	0.50	1.50	0.60	0.30	24	4	24
965	3	5	376	5.6	0.80	1.90	0.90	0.50	24	3	24
966	3	5	377	1.2	0.05	0.50	0.50	0.30	8	1	8
967	3	5	378	2.4	0.25	0.75	0.50	0.25	18	3	18
968	3	5	379	3.8	0.40	1.30	0.60	0.35	22	2	22
969	3	5	380	4.6	0.80	1.40	1.00	0.45	24	5	24
970	3	5	381	1.7	0.05	0.80	0.60	0.25	19	3	19
971	3	5	382	1.7	0.15	0.70	0.60	0.35	14	3	14
972	3	5	383	5.5	1.00	1.40	0.55	0.30	30	4	30
973	3	5	384	5.1	0.90	1.50	0.70	0.40	24	5	24
974	3	5	385	5.0	0.70	1.50	0.60	0.30	25	6	25
975	3	5	386	1.7	0.15	0.65	0.40	0.20	16	4	16
976	3	5	387	3.8	0.50	1.50	0.60	0.30	20	3	20
977	3	5	388	1.6	0.05	0.65	0.45	0.25	14	2	14
978	3	5	389	6.2	0.75	2.15	1.10	0.55	29	5	29
979	3	5	390	4.4	0.50	1.20	0.70	0.30	23	3	23
980	3	5	391	7.7	0.80	2.50	0.80	0.40	32	3	32
981	3	5	392	3.8	0.55	1.20	0.60	0.40	24	5	24
982	3	5	393	2.5	0.20	0.90	0.50	0.25	19	4	19
983	3	5	394	2.8	0.40	0.80	0.50	0.25	19	4	19
984	3	5	395	5.7	1.00	2.00	1.00	0.40	21	4	21
985	3	5	396	5.9	1.10	1.50	0.30	0.15	27	4	27
986	3	5	397	2.7	0.30	1.00	0.60	0.30	23	2	23
987	3	5	398	3.1	0.40	1.20	0.80	0.45	18	3	18
988	3	5	399	3.9	0.50	1.50	0.70	0.40	24	3	24
989	3	5	400	2.7	0.20	1.10	0.55	0.30	21	4	21
990	3	5	401	3.7	0.50	1.00	0.65	0.40	24	6	24
991	3	5	402	6.2	0.55	2.10	0.75	0.40	29	5	29
992	3	5	403	3.6	0.25	1.35	0.75	0.50	21	4	21
993	3	5	404	4.8	0.80	1.90	0.90	0.45	23	4	23
994	3	5	405	1.9	0.10	0.90	0.75	0.45	14	3	14
995	3	5	406	3.1	0.50	1.00	0.60	0.30	18	6	18
996	3	5	407	1.9	0.05	0.80	0.45	0.25	17	6	17
997	3	5	408	6.3	1.15	2.35	0.90	0.35	28	5	28
998	3	5	409	1.3	0.05	0.75	0.75	0.40	11	1	11
999	3	5	410	2.1	0.10	1.05	0.80	0.45	16	3	16
1000	3	5	411	6.1	0.50	2.00	0.75	0.35	29	4	29

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1001	3	5	412	3.8	0.35	1.50	0.70	0.35	20	3	20
1002	3	5	413	3.5	0.05	1.35	0.65	0.40	22	4	22
1003	3	5	414	3.9	0.60	1.20	0.60	0.30	22	4	22
1004	3	5	415	4.3	0.80	1.00	0.60	0.25	26	4	26
1005	3	5	416	3.7	0.40	1.50	1.00	0.50	21	5	21
1006	3	5	417	2.3	0.25	0.85	0.50	0.25	18	5	18
1007	3	5	418	3.5	0.70	0.95	0.65	0.30	21	3	21
1008	3	5	419	3.4	0.35	1.25	0.60	0.25	21	4	21
1009	3	5	420	6.3	0.75	2.25	1.00	0.40	27	4	27
1010	3	5	421	6.8	0.90	2.20	0.80	0.35	27	4	27
1011	3	5	422	3.1	0.55	1.00	0.70	0.35	20	4	20
1012	3	5	423	3.5	0.25	1.00	0.60	0.30	18	3	18
1013	3	5	424	2.8	0.20	1.05	0.65	0.25	19	4	19
1014	3	5	425	4.5	0.75	1.30	0.75	0.40	25	5	25
1015	3	5	426	2.1	0.05	0.90	0.60	0.30	17	3	17
1016	3	5	427	2.3	0.00	1.15	0.65	0.35	17	3	17
1017	3	5	428	2.1	0.10	1.00	0.70	0.35	15	3	15
1018	3	5	429	2.5	0.30	0.95	0.85	0.45	17	4	17
1019	3	5	430	5.5	0.80	2.00	1.00	0.50	25	4	25
1020	3	5	431	3.5	0.30	1.60	1.00	0.55	22	4	22
1021	3	5	432	2.9	0.30	0.90	0.65	0.35	23	4	23
1022	3	5	433	4.8	0.50	1.50	0.65	0.30	26	4	26
1023	4	1	434	6.0	0.65	2.00	0.80	0.35	27	4	27
1024	4	1	435	4.1	0.30	1.55	0.85	0.40	25	2	25
1025	4	1	436	4.3	0.40	1.30	0.50	0.20	24	5	24
1026	4	1	437	3.7	0.50	1.00	0.50	0.25	24	6	24
1027	4	1	438	3.7	0.45	1.00	0.45	0.20	25	6	25
1028	4	1	439	3.8	0.50	1.15	0.50	0.25	25	6	25
1029	4	1	440	3.8	0.60	0.90	0.60	0.25	25	6	25
1030	4	1	441	4.0	0.25	1.40	0.55	0.30	25	5	25
1031	4	1	442	4.1	0.50	1.45	0.55	0.25	26	5	26
1032	4	1	443	4.7	0.50	1.55	0.70	0.35	25	4	25
1033	4	1	444	4.8	0.60	1.50	0.60	0.25	26	5	26
1034	4	1	445	4.1	0.30	1.50	0.55	0.30	26	7	26
1035	4	1	446	4.9	0.80	1.30	0.75	0.35	27	6	27
1036	4	1	447	4.4	0.50	1.50	1.05	0.55	25	3	25
1037	4	1	448	2.7	0.25	1.00	0.50	0.25	24	3	24
1038	4	1	449	3.7	0.55	1.50	0.60	0.30	26	5	26
1039	4	1	450	4.4	0.40	1.20	0.45	0.15	28	10	28
1040	4	1	451	5.6	0.70	1.60	0.55	0.25	29	3	29
1041	4	1	452	3.2	0.20	1.20	0.70	0.40	22	2	22
1042	4	1	453	5.1	0.60	1.45	1.00	0.50	23	4	23
1043	4	1	454	2.3	0.25	0.75	0.40	0.20	19	7	19
1044	4	1	455	3.8	0.50	0.90	0.35	0.15	26	9	26
1045	4	1	456	4.9	0.90	1.15	0.65	0.30	29	4	29
1046	4	1	457	3.7	0.65	1.45	0.75	0.40	25	11	25
1047	4	1	458	3.9	0.25	1.40	0.60	0.25	28	5	28
1048	4	1	459	4.9	0.65	1.85	1.10	0.55	25	2	25
1049	4	1	460	4.5	1.10	1.05	1.05	0.45	25	4	25
1050	4	1	461	4.1	0.45	1.50	0.75	0.35	25	4	25

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1051	4	1	462	3.1	0.45	1.05	0.45	0.20	23	3	23
1052	4	1	463	2.7	0.30	0.95	0.70	0.35	21	5	21
1053	4	1	464	2.2	0.20	1.05	0.80	0.35	18	3	18
1054	4	1	465	3.8	0.50	1.50	0.65	0.30	26	8	26
1055	4	1	466	4.3	0.70	1.40	0.65	0.35	27	8	27
1056	4	1	467	4.8	0.55	1.30	0.65	0.30	23	5	23
1057	4	1	468	5.8	0.55	2.15	1.05	0.55	25	1	25
1058	4	1	469	4.9	0.60	1.40	0.75	0.35	24	3	24
1059	4	1	470	6.0	0.70	2.05	1.00	0.50	20	1	20
1060	4	1	471	5.7	0.90	1.90	0.95	0.50	32	3	32
1061	4	1	472	3.1	0.40	1.05	0.60	0.25	26	4	26
1062	4	1	473	3.5	0.60	0.95	0.60	0.25	27	8	27
1063	4	1	474	3.0	0.40	0.85	0.45	0.25	27	12	27
1064	4	1	475	3.7	0.60	1.15	0.60	0.25	30	10	30
1065	4	1	476	4.7	0.50	1.55	0.85	0.40	31	4	31
1066	4	1	477	3.2	0.20	1.20	0.75	0.40	26	2	26
1067	4	1	478	4.3	0.40	1.75	1.00	0.45	30	3	30
1068	4	1	479	3.5	0.35	1.00	0.50	0.25	26	6	26
1069	4	1	480	4.0	0.30	1.50	0.90	0.40	29	4	29
1070	4	1	481	4.7	0.50	1.75	0.90	0.40	31	4	31
1071	4	1	482	3.0	0.50	0.75	0.30	0.15	28	8	28
1072	4	1	483	3.5	0.40	1.05	0.45	0.20	33	5	33
1073	4	1	484	4.9	0.55	1.60	0.50	0.25	33	5	33
1074	4	1	485	2.9	0.50	0.85	0.40	0.20	25	8	25
1075	4	1	486	5.1	0.65	1.40	0.50	0.20	30	6	30
1076	4	1	487	5.9	0.60	1.70	0.85	0.40	31	3	31
1077	4	1	488	3.7	0.40	1.65	0.65	0.30	27	3	27
1078	4	1	489	4.9	0.65	1.50	0.70	0.35	28	4	28
1079	4	1	490	4.4	0.65	1.10	0.75	0.35	23	1	23
1080	4	1	491	4.7	0.60	1.30	0.45	0.20	28	4	28
1081	4	1	492	5.3	0.80	1.10	0.45	0.20	32	8	32
1082	4	1	493	3.5	0.35	0.95	0.60	0.30	27	5	27
1083	4	1	494	3.7	0.50	1.10	0.70	0.35	31	6	31
1084	4	1	495	2.4	0.10	1.25	0.75	0.35	21	6	21
1085	4	1	496	4.0	0.45	1.20	0.85	0.40	25	3	25
1086	4	1	497	3.2	0.50	0.90	0.60	0.35	25	3	25
1087	4	1	498	3.5	0.50	0.85	0.65	0.30	27	4	27
1088	4	1	499	3.8	0.50	0.95	0.65	0.35	26	4	26
1089	4	1	500	4.7	0.80	1.45	0.85	0.50	27	2	27
1090	4	1	501	5.0	0.35	1.80	1.00	0.55	23	1	23
1091	4	1	502	1.6	0.10	0.70	0.60	0.30	13	2	13
1092	4	1	504	1.8	0.10	0.65	0.65	0.35	15	2	15
1093	4	1	505	2.3	0.10	0.85	0.65	0.35	18	3	18
1094	4	1	506	3.4	0.30	1.20	1.00	0.50	20	1	20
1095	4	1	507	2.3	0.20	0.85	0.85	0.40	15	1	15
1096	4	1	508	1.5	0.10	0.65	0.85	0.45	11	1	11
1097	4	1	509	1.8	0.15	0.60	0.70	0.35	14	3	14
1098	4	1	510	4.0	0.65	1.00	0.65	0.30	22	3	22
1099	4	1	511	6.1	0.20	1.25	0.90	0.40	25	3	25
1100	4	1	512	2.8	0.20	1.05	0.90	0.40	19	2	19

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1101	4	1	513	4.5	0.50	1.35	0.85	0.50	24	2	24
1102	4	1	514	4.0	0.50	1.15	0.80	0.35	25	3	25
1103	4	1	515	2.7	0.30	0.85	0.50	0.20	20	4	20
1104	4	1	516	2.0	0.05	0.70	0.70	0.35	15	3	15
1105	4	1	517	3.7	0.20	1.25	0.80	0.45	20	3	20
1106	4	1	518	2.5	0.20	0.75	0.70	0.30	17	4	17
1107	4	1	522	2.3	0.20	1.00	0.80	0.45	17	7	17
1108	4	1	523	4.0	0.20	1.30	0.50	0.25	22	2	22
1109	4	1	524	2.8	0.25	1.20	0.60	0.35	24	5	24
1110	4	1	525	3.5	0.30	1.05	0.55	0.30	25	4	25
1111	4	1	526	3.9	0.45	0.95	0.95	0.25	20	2	20
1112	4	1	527	3.5	0.40	1.15	0.60	0.30	24	4	24
1113	4	1	528	4.9	0.25	1.70	0.90	0.40	25	4	25
1114	4	1	529	3.4	0.30	1.10	0.55	0.30	25	6	25
1115	4	1	530	2.8	0.20	1.10	0.65	0.30	21	4	21
1116	4	1	531	3.1	0.20	1.10	0.70	0.30	21	4	21
1117	4	1	532	2.4	0.20	0.90	0.75	0.35	20	5	20
1118	4	1	533	2.6	0.05	0.60	0.40	0.15	12	4	12
1119	4	1	534	4.1	0.20	1.35	0.95	0.45	17	3	17
1120	4	1	535	4.7	0.30	1.75	0.75	0.35	24	3	24
1121	4	1	536	4.7	0.55	1.40	1.00	0.50	25	4	25
1122	4	2	537	4.4	0.55	1.60	0.70	0.30	24	5	24
1123	4	2	539	3.1	0.40	1.25	0.75	0.35	19	2	19
1124	4	2	540	5.0	0.55	2.25	0.95	0.40	23	3	23
1125	4	2	543	2.1	0.20	0.95	0.50	0.20	15	3	15
1126	4	2	545	3.0	0.35	1.00	0.65	0.25	18	2	18
1127	4	2	546	3.2	0.30	1.15	0.60	0.25	19	2	19
1128	4	2	548	3.5	0.45	1.15	0.65	0.25	19	3	19
1129	4	2	549	2.0	0.20	0.80	0.40	0.15	17	4	17
1130	4	2	552	4.4	0.50	1.60	0.90	0.45	25	3	25
1131	4	2	553	4.4	0.50	1.60	0.85	0.35	21	1	21
1132	4	2	554	4.5	0.70	1.25	0.80	0.35	25	4	25
1133	4	2	557	5.0	0.90	1.80	0.90	0.40	27	3	27
1134	4	2	558	4.7	0.85	1.40	0.65	0.30	28	7	28
1135	4	2	560	3.2	0.20	1.30	1.00	0.45	19	1	19
1136	4	2	561	1.9	0.15	0.70	0.70	0.30	17	3	17
1137	4	2	562	3.3	0.35	1.10	0.90	0.40	19	1	19
1138	4	2	563	3.8	0.30	1.40	1.05	0.40	18	2	18
1139	4	2	564	4.9	0.90	1.85	1.25	0.45	23	1	23
1140	4	2	565	3.5	0.35	1.35	1.10	0.50	19	1	19
1141	4	2	566	5.8	0.90	1.50	0.70	0.30	27	2	27
1142	4	2	567	5.1	0.40	1.75	1.10	0.45	22	2	22
1143	4	2	568	4.4	0.45	1.50	0.80	0.35	23	2	23
1144	4	2	569	6.5	1.00	2.20	0.65	0.35	31	4	31
1145	4	2	571	3.4	0.40	1.30	0.70	0.35	22	4	22
1146	4	2	572	4.1	0.70	1.75	0.85	0.40	23	5	23
1147	4	2	573	2.1	0.35	0.85	0.70	0.35	17	4	17
1148	4	2	574	1.6	0.20	0.70	0.65	0.30	13	4	13
1149	4	2	575	2.1	0.25	0.65	0.55	0.30	13	3	13
1150	4	2	576	3.0	0.30	1.00	0.70	0.30	20	3	20

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91	OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1151	4	2	577	1.9	0.10	0.80	0.50	0.20	16	4	16	1201	4	2	645	2.4	0.30	0.70	0.40	0.20	17	6	17
1152	4	2	578	3.7	0.45	1.40	0.75	0.40	22	3	22	1202	4	2	646	2.9	0.25	1.00	0.55	0.25	17	4	17
1153	4	2	579	3.2	0.25	1.45	0.60	0.30	20	5	20	1203	4	2	647	1.9	0.20	0.65	0.40	0.20	16	4	16
1154	4	2	581	4.9	0.60	2.05	0.80	0.50	29	6	29	1204	4	2	648	1.8	0.10	0.70	0.45	0.25	15	4	15
1155	4	2	583	2.4	0.15	0.90	0.60	0.30	17	4	17	1205	4	2	649	2.3	0.15	0.85	0.55	0.25	15	3	15
1156	4	2	584	2.6	0.20	0.95	0.65	0.30	17	3	17	1206	4	2	650	2.9	0.45	1.15	0.60	0.30	17	4	17
1157	4	2	585	3.2	0.25	1.10	0.60	0.30	21	3	21	1207	4	3	651	4.8	0.55	1.60	0.70	0.40	27	4	27
1158	4	2	587	3.1	0.30	1.15	0.80	0.30	19	3	19	1208	4	3	652	4.8	0.45	1.70	0.80	0.35	22	2	22
1159	4	2	589	2.1	0.35	0.75	0.45	0.20	16	6	16	1209	4	3	653	3.4	0.25	1.25	0.85	0.40	19	4	19
1160	4	2	590	4.4	0.65	1.35	0.70	0.30	21	3	21	1210	4	3	654	3.1	0.35	0.90	0.50	0.20	21	6	21
1161	4	2	591	4.3	0.45	1.40	0.70	0.35	23	4	23	1211	4	3	655	2.5	0.10	0.90	0.50	0.20	18	4	18
1162	4	2	592	3.6	0.55	1.15	0.70	0.35	22	4	22	1212	4	3	656	2.6	0.20	0.85	0.50	0.20	17	3	17
1163	4	2	593	2.4	0.40	0.90	0.70	0.30	19	2	19	1213	4	3	657	3.0	0.15	1.10	0.90	0.50	20	4	20
1164	4	2	594	4.0	0.40	1.45	0.80	0.35	24	6	24	1214	4	3	658	2.8	0.00	1.15	0.75	0.35	18	2	18
1165	4	2	595	3.0	0.20	1.10	0.85	0.40	16	1	16	1215	4	3	659	1.5	0.00	0.70	0.65	0.30	10	1	10
1166	4	2	597	3.5	0.30	1.15	0.75	0.30	19	3	19	1216	4	3	660	2.2	0.10	1.00	1.15	0.55	13	1	13
1167	4	2	598	3.2	0.45	1.00	0.80	0.30	20	3	20	1217	4	3	661	5.1	0.45	1.90	1.20	0.60	20	1	20
1168	4	2	599	3.0	0.20	1.05	0.80	0.40	15	1	15	1218	4	3	662	2.2	0.20	0.95	0.70	0.30	17	3	17
1169	4	2	600	4.2	0.55	1.25	0.75	0.35	20	1	20	1219	4	3	663	4.3	0.20	1.50	0.85	0.40	25	2	25
1170	4	2	602	4.0	0.45	1.30	1.30	0.40	24	1	24	1220	4	3	664	4.0	0.35	1.80	1.00	0.50	20	2	20
1171	4	2	606	5.3	0.90	1.50	0.85	0.40	22	6	22	1221	4	3	665	4.4	0.65	1.10	0.70	0.30	20	4	20
1172	4	2	607	2.3	0.10	0.95	0.65	0.35	13	3	13	1222	4	3	666	4.1	0.20	1.45	0.85	0.40	17	2	17
1173	4	2	608	1.9	0.10	0.70	0.55	0.30	14	3	14	1223	4	3	667	2.3	0.05	0.90	0.70	0.35	15	3	15
1174	4	2	610	3.2	0.30	0.95	0.50	0.25	21	5	21	1224	4	3	668	1.4	0.00	0.65	0.80	0.40	9	1	9
1175	4	2	611	2.3	0.20	0.80	0.40	0.20	15	3	15	1225	4	3	669	2.6	0.15	0.80	0.75	0.35	14	4	14
1176	4	2	612	2.9	0.35	1.00	0.55	0.30	21	6	21	1226	4	3	670	4.1	0.30	1.40	0.90	0.50	21	3	21
1177	4	2	614	2.6	0.30	0.95	0.45	0.25	19	5	19	1227	4	3	671	2.7	0.10	1.20	0.85	0.40	16	3	16
1178	4	2	615	2.9	0.30	1.15	0.55	0.25	20	5	20	1228	4	3	672	2.7	0.10	1.05	0.70	0.30	15	1	15
1179	4	2	616	2.1	0.30	1.00	0.50	0.25	17	5	17	1229	4	3	673	2.6	0.00	1.05	0.75	0.35	16	2	16
1180	4	2	617	3.0	0.15	1.20	0.60	0.30	20	5	20	1230	4	3	674	3.0	0.20	1.00	0.70	0.35	19	3	19
1181	4	2	618	2.5	0.25	0.90	0.60	0.30	17	3	17	1231	4	3	675	3.5	0.25	1.60	0.90	0.35	22	6	22
1182	4	2	619	1.9	0.15	0.75	0.55	0.25	13	1	13	1232	4	3	676	2.2	0.15	0.90	0.65	0.25	15	3	15
1183	4	2	620	4.1	0.35	1.90	1.20	0.50	20	1	20	1233	4	3	677	2.0	0.20	0.70	0.55	0.25	14	4	14
1184	4	2	623	4.3	0.30	1.85	0.95	0.45	23	3	23	1234	4	3	678	3.4	0.20	1.15	0.70	0.35	20	3	20
1185	4	2	624	2.7	0.40	1.00	0.85	0.35	16	2	16	1235	4	3	680	3.7	0.25	1.50	1.10	0.55	19	4	19
1186	4	2	626	2.5	0.30	0.90	0.60	0.30	19	3	19	1236	4	3	681	3.0	0.20	1.00	0.65	0.35	17	4	17
1187	4	2	627	4.5	0.40	1.45	0.90	0.40	25	2	25	1237	4	3	682	2.5	0.10	0.80	0.55	0.25	17	3	17
1188	4	2	628	4.2	0.35	1.45	1.45	0.50	26	3	26	1238	4	3	683	4.2	0.25	1.40	0.85	0.35	20	1	20
1189	4	2	629	1.1	0.05	0.45	0.50	0.25	10	1	10	1239	4	3	684	3.3	0.35	0.95	0.60	0.30	21	4	21
1190	4	2	630	1.8	0.10	0.75	0.75	0.40	12	1	12	1240	4	3	685	3.0	0.30	0.80	0.95	0.55	19	3	19
1191	4	2	631	1.6	0.20	0.60	0.60	0.25	13	3	13	1241	4	3	686	2.2	0.00	0.85	0.55	0.25	13	3	13
1192	4	2	632	1.9	0.10	0.70	0.60	0.30	12	1	12	1242	4	3	687	3.0	0.00	1.20	0.75	0.40	17	3	17
1193	4	2	633	3.9	0.25	1.45	0.75	0.35	20	1	20	1243	4	3	688	3.0	0.30	0.90	0.50	0.25	18	4	18
1194	4	2	634	4.6	0.50	1.45	0.65	0.30	24	2	24	1244	4	3	689	3.9	0.20	1.40	0.60	0.30	19	3	19
1195	4	2	635	3.0	0.30	0.80	0.40	0.20	20	3	20	1245	4	3	691	3.0	0.15	1.20	0.60	0.25	19	4	19
1196	4	2	637	4.0	0.35	1.60	0.65	0.30	21	1	21	1246	4	3	692	3.7	0.35	1.70	0.95	0.45	21	4	21
1197	4	2	638	2.9	0.35	0.95	0.45	0.25	18	3	18	1247	4	3	693	2.4	0.00	0.90	0.50	0.20	16	3	16
1198	4	2	640	3.7	0.40	1.40	0.60	0.30	21	6	21	1248	4	3	694	3.8	0.30	1.20	0.80	0.40	19	1	19
1199	4	2	643	4.5	1.00	1.45	0.80	0.35	23	6	23	1249	4	3	695	3.7	0.35	1.10	0.85	0.40	20	4	20
1200	4	2	644	4.0	0.35	1.25	0.50	0.20	21	5	21	1250	4	3	696	3.5	0.40	0.85	0.65	0.30	21	4	21

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OBS	BLOCK	PLOT	TAG	DBH91	HRT91	SAP91	RAD1091	RAD0591	STMLN91	CRNHT91	CRNTP91
1251	4	3	697	3.8	0.30	1.40	1.00	0.45	18	5	18
1252	4	3	698	3.7	0.50	1.05	0.75	0.35	21	4	21
1253	4	3	699	3.8	0.45	1.45	0.90	0.45	19	4	19
1254	4	3	700	2.6	0.00	1.10	0.80	0.30	15	4	15
1255	4	3	701	2.6	0.30	0.80	0.75	0.35	17	4	17
1256	4	3	702	3.0	0.15	1.55	0.85	0.45	21	3	21
1257	4	3	703	2.3	0.15	1.05	0.55	0.35	19	4	19
1258	4	3	704	3.1	0.35	1.10	0.70	0.40	18	3	18
1259	4	3	705	3.8	1.20	0.80	0.80	0.40	21	4	21
1260	4	3	706	3.2	0.10	1.20	0.80	0.40	19	4	19
1261	4	3	707	3.2	0.20	1.30	0.80	0.40	18	2	18
1262	4	3	708	3.3	0.25	1.20	0.75	0.40	19	4	19
1263	4	3	709	2.2	0.15	1.00	0.95	0.45	14	3	14
1264	4	3	710	2.6	0.15	1.35	0.80	0.40	15	2	15
1265	4	3	711	3.1	0.20	1.15	0.80	0.45	18	3	18
1266	4	3	712	3.1	0.30	1.00	0.75	0.35	16	4	16
1267	4	3	713	2.8	0.20	1.05	0.65	0.30	17	4	17
1268	4	3	714	2.5	0.20	1.00	0.85	0.35	15	4	15
1269	4	3	715	3.2	0.20	1.35	0.90	0.40	17	4	17
1270	4	3	716	2.5	0.15	1.10	0.65	0.35	18	4	18
1271	4	3	717	4.3	0.40	1.65	1.15	0.55	23	3	23
1272	4	3	718	3.5	0.55	1.25	0.70	0.40	20	2	20
1273	4	3	719	3.2	0.30	1.20	0.95	0.50	18	2	18
1274	4	3	720	2.4	0.15	1.05	0.75	0.30	15	3	15
1275	4	3	721	2.1	0.10	0.80	0.45	0.20	15	2	15
1276	4	3	722	4.5	0.50	1.70	0.90	0.40	22	4	22
1277	4	3	723	3.0	0.45	1.00	0.85	0.25	18	1	18
1278	4	3	724	3.6	0.30	1.40	0.90	0.45	18	3	18
1279	4	3	725	3.8	0.30	1.30	1.00	0.40	21	4	21
1280	4	3	726	4.2	0.30	1.65	1.10	0.50	24	2	24
1281	4	3	727	3.9	0.30	1.45	1.10	0.55	18	1	18
1282	4	3	728	4.6	0.60	1.20	1.00	0.50	21	3	21
1283	4	3	729	1.8	0.10	0.90	0.50	0.25	13	4	13
1284	4	3	730	4.6	0.55	1.50	0.70	0.40	24	3	24
1285	4	3	731	4.6	0.50	1.75	1.10	0.50	22	4	22
1286	4	3	732	3.1	0.20	1.35	0.85	0.40	17	3	17
1287	4	3	733	2.6	0.20	0.90	0.70	0.35	16	4	16
1288	4	3	734	3.8	0.20	1.65	0.90	0.45	20	1	20
1289	4	3	735	2.2	0.20	0.95	0.75	0.35	16	1	16
1290	4	3	736	3.6	0.30	1.30	0.90	0.40	19	4	19
1291	4	3	737	2.5	0.15	1.05	0.85	0.35	15	3	15
1292	4	3	738	3.0	0.10	1.35	1.05	0.50	17	4	17
1293	4	3	739	2.2	0.05	1.10	0.75	0.35	16	2	16
1294	4	3	740	3.8	0.50	1.10	0.80	0.35	19	4	19
1295	4	3	741	3.3	0.30	1.40	1.25	0.50	15	2	15
1296	4	3	742	3.1	0.20	1.15	0.70	0.35	18	4	18
1297	4	3	743	2.8	0.35	0.95	0.65	0.30	15	1	15
1298	4	3	744	2.7	0.20	1.00	0.70	0.30	16	4	16
1299	4	3	745	4.0	0.20	1.40	1.00	0.50	20	2	20
1300	4	3	746	3.2	0.10	1.10	1.05	0.45	16	2	16

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1301	4	3	747	4.1	0.20	1.50	1.20	0.55	17	2	17
1302	4	3	748	4.5	0.20	1.80	1.10	0.55	19	3	19
1303	4	3	749	2.7	0.25	1.05	0.75	0.40	18	4	18
1304	4	3	750	5.5	0.50	2.20	1.40	0.65	23	2	23
1305	4	3	751	3.5	0.30	1.30	0.95	0.60	17	1	17
1306	4	3	752	2.5	0.15	1.05	0.75	0.35	15	3	15
1307	4	3	753	3.2	0.20	1.40	1.00	0.45	17	4	17
1308	4	3	754	3.5	0.15	1.80	1.10	0.50	22	4	22
1309	4	3	755	2.8	0.20	1.05	0.60	0.30	18	4	18
1310	4	3	756	2.3	0.15	1.15	0.65	0.30	18	3	18
1311	4	3	757	3.1	0.20	1.20	0.95	0.45	18	4	18
1312	4	3	758	2.3	0.15	0.90	0.65	0.35	15	2	15
1313	4	3	759	5.1	0.40	1.85	1.15	0.60	23	1	23
1314	4	3	760	1.9	0.15	0.80	0.70	0.30	13	2	13
1315	4	3	761	2.8	0.20	1.10	0.90	0.40	16	1	16
1316	4	3	762	4.1	0.25	1.75	1.40	0.65	18	1	18
1317	4	3	763	3.2	0.40	1.05	0.80	0.35	16	1	16
1318	4	3	764	3.1	0.15	1.25	0.90	0.40	16	1	16
1319	4	3	765	2.8	0.10	0.90	1.00	0.40	12	2	12
1320	4	3	766	2.7	0.15	1.00	0.90	0.45	15	2	15
1321	4	3	767	5.3	0.30	1.95	1.15	0.50	26	1	26
1322	4	3	768	2.2	0.10	1.00	0.90	0.40	14	1	14
1323	4	3	769	3.2	0.10	1.20	0.85	0.35	19	1	19
1324	4	3	770	3.0	0.30	0.70	0.70	0.30	19	4	19
1325	4	3	771	4.1	0.30	1.55	1.05	0.50	17	1	17
1326	4	4	772	2.9	0.20	0.95	0.55	0.30	17	1	17
1327	4	4	773	4.3	0.20	1.75	0.90	0.45	21	1	21
1328	4	4	775	2.6	0.15	0.85	0.75	0.35	14	1	14
1329	4	4	776	3.2	0.35	1.05	0.85	0.40	14	1	14
1330	4	4	778	1.9	0.20	0.70	0.55	0.25	13	3	13
1331	4	4	779	2.9	0.20	1.00	0.75	0.35	14	2	14
1332	4	4	781	4.0	0.30	1.40	0.95	0.50	18	4	18
1333	4	4	783	2.8	0.15	1.00	0.70	0.35	15	2	15
1334	4	4	784	4.7	0.30	1.60	1.15	0.55	19	2	19
1335	4	4	785	2.9	0.20	1.25	0.85	0.40	21	3	21
1336	4	4	786	5.0	0.50	1.60	1.10	0.50	22	3	22
1337	4	4	787	3.9	0.35	1.45	1.00	0.45	21	4	21
1338	4	4	788	4.1	0.70	0.95	1.10	0.45	22	4	22
1339	4	4	789	2.9	0.25	1.20	1.00	0.45	17	2	17
1340	4	4	790	3.8	0.20	1.40	0.90	0.45	19	3	19
1341	4	4	793	3.0	0.20	1.05	0.70	0.35	15	4	15
1342	4	4	794	2.6	0.25	1.00	0.65	0.35	18	3	18
1343	4	4	795	3.9	0.25	1.50	0.75	0.40	20	1	20
1344	4	4	797	5.3	0.45	1.75	0.90	0.45	25	3	25
1345	4	4	798	3.5	0.35	1.25	0.85	0.30	22	3	22
1346	4	4	799	2.5	0.15	0.95	0.70	0.40	16	1	16
1347	4	4	801	4.5	0.40	1.55	1.00	0.45	19	2	19
1348	4	4	802	2.8	0.20	1.05	0.50	0.25	16	4	16
1349	4	4	803	3.8	0.35	1.35	1.00	0.50	18	4	18
1350	4	4	804	3.2	0.40	1.05	0.65	0.30	19	4	19

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1351	4	4	806	3.3	0.20	1.20	0.80	0.40	19	3	19
1352	4	4	807	5.0	0.45	1.55	0.95	0.45	20	3	20
1353	4	4	808	3.8	0.45	1.35	1.00	0.40	23	5	23
1354	4	4	809	4.5	0.60	1.80	1.25	0.65	22	2	22
1355	4	4	810	2.9	0.20	1.00	0.75	0.35	16	3	16
1356	4	4	811	3.3	0.25	1.15	0.75	0.35	16	1	16
1357	4	4	812	3.2	0.35	0.95	0.55	0.30	17	4	17
1358	4	4	813	3.8	0.25	1.60	1.25	0.60	20	3	20
1359	4	4	815	3.7	0.15	1.80	1.50	0.70	19	1	19
1360	4	4	816	2.0	0.20	0.80	0.85	0.45	13	2	13
1361	4	4	817	4.3	0.45	1.40	0.95	0.45	19	1	19
1362	4	4	819	5.1	0.55	1.75	1.00	0.45	21	3	21
1363	4	4	822	3.5	0.30	1.40	0.95	0.45	14	1	14
1364	4	4	823	2.0	0.10	0.75	0.70	0.35	18	2	18
1365	4	4	824	5.3	0.30	1.90	1.10	0.45	20	3	20
1366	4	4	825	3.7	0.20	1.30	0.85	0.40	18	1	18
1367	4	4	826	3.1	0.15	1.20	0.75	0.35	18	3	18
1368	4	4	828	3.9	0.30	1.45	1.00	0.45	17	1	17
1369	4	4	833	3.5	0.20	1.60	1.20	0.60	15	1	15
1370	4	4	834	2.9	0.25	1.00	0.95	0.45	14	2	14
1371	4	4	835	5.3	0.75	1.55	1.10	0.55	25	1	25
1372	4	4	837	2.6	0.10	1.15	0.80	0.40	15	1	15
1373	4	4	838	4.2	0.30	1.30	0.60	0.30	24	1	24
1374	4	4	839	4.6	0.35	1.70	0.85	0.40	25	2	25
1375	4	4	841	4.0	0.25	1.30	0.85	0.40	21	3	21
1376	4	4	842	3.0	0.20	1.10	0.65	0.30	18	1	18
1377	4	4	844	2.8	0.20	1.05	0.95	0.45	14	3	14
1378	4	4	845	3.7	0.35	1.15	0.90	0.45	18	2	18
1379	4	4	847	3.0	0.15	1.25	0.95	0.55	15	1	15
1380	4	4	849	4.2	0.20	1.50	0.90	0.45	18	2	18
1381	4	4	850	4.6	0.20	2.00	0.85	0.40	21	2	21
1382	4	4	851	3.5	0.15	1.15	0.60	0.30	20	3	20
1383	4	4	853	4.1	0.30	1.70	1.30	0.60	17	2	17
1384	4	4	854	4.1	0.40	1.55	0.90	0.40	19	2	19
1385	4	4	855	3.6	0.35	1.30	0.80	0.35	19	1	19
1386	4	4	856	2.8	0.25	1.00	0.45	0.25	19	3	19
1387	4	4	858	2.0	0.15	0.75	0.70	0.35	14	2	14
1388	4	4	859	2.9	0.35	1.40	0.90	0.40	16	2	16
1389	4	4	860	4.1	0.55	1.10	0.60	0.25	16	1	16
1390	4	4	861	3.0	0.25	1.40	0.80	0.35	16	1	16
1391	4	4	862	3.2	0.30	1.10	0.85	0.40	16	1	16
1392	4	4	863	4.4	0.35	1.55	0.80	0.35	22	5	22
1393	4	4	864	3.2	0.40	1.15	0.65	0.30	17	3	17
1394	4	4	865	3.8	0.30	1.60	1.10	0.50	19	3	19
1395	4	4	866	2.8	0.15	1.25	0.90	0.45	18	4	18
1396	4	4	867	2.7	0.45	0.55	0.75	0.30	17	3	17
1397	4	4	869	2.9	0.25	0.85	0.55	0.25	14	4	14
1398	4	4	870	4.0	0.55	1.50	1.00	0.50	19	4	19
1399	4	4	871	2.9	0.25	1.30	0.90	0.45	17	3	17
1400	4	4	873	2.9	0.15	1.10	0.85	0.40	15	3	15

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1401	4	4	874	2.5	0.20	1.00	0.85	0.45	14	3	14
1402	4	4	875	3.0	0.25	1.05	0.55	0.25	17	4	17
1403	4	4	876	3.0	0.20	1.10	0.60	0.35	16	5	16
1404	4	4	877	2.1	0.10	0.75	0.60	0.30	12	2	12
1405	4	4	878	3.7	0.50	1.25	0.95	0.45	18	2	18
1406	4	4	879	3.3	0.35	1.40	0.95	0.45	17	2	17
1407	4	4	881	3.2	0.00	1.45	0.95	0.50	10	2	10
1408	4	4	882	2.7	0.10	1.20	0.90	0.45	14	3	14
1409	4	5	884	4.1	0.40	1.55	1.05	0.45	22	1	22
1410	4	5	885	3.2	0.15	1.20	0.75	0.40	18	2	18
1411	4	5	886	4.2	0.35	1.20	0.80	0.35	17	3	17
1412	4	5	887	2.0	0.00	0.80	0.60	0.30	12	3	12
1413	4	5	888	3.8	0.45	1.65	1.15	0.55	18	4	18
1414	4	5	889	3.2	0.20	0.95	0.65	0.25	18	1	18
1415	4	5	890	4.6	0.30	1.30	0.90	0.45	18	1	18
1416	4	5	891	3.6	0.25	1.05	0.65	0.30	22	3	22
1417	4	5	892	4.2	0.20	1.80	1.15	0.55	19	1	19
1418	4	5	893	3.3	0.30	1.20	0.90	0.45	17	3	17
1419	4	5	894	1.9	0.20	0.65	0.45	0.20	14	3	14
1420	4	5	895	3.2	0.10	1.15	1.00	0.45	15	3	15
1421	4	5	896	2.1	0.05	0.90	0.75	0.40	13	1	13
1422	4	5	897	3.2	0.20	1.25	0.65	0.30	19	3	19
1423	4	5	898	2.2	0.10	0.90	0.80	0.35	14	3	14
1424	4	5	899	2.8	0.20	1.10	0.95	0.50	14	1	14
1425	4	5	900	2.2	0.10	0.80	0.70	0.40	14	4	14
1426	4	5	901	4.0	0.45	1.60	1.00	0.50	20	2	20
1427	4	5	902	2.6	0.10	1.00	0.75	0.35	16	4	16
1428	4	5	903	4.2	0.30	1.15	0.80	0.40	20	1	20
1429	4	5	904	2.5	0.35	0.85	0.60	0.30	16	4	16
1430	4	5	905	3.6	0.10	1.85	1.20	0.60	18	1	18
1431	4	5	906	4.4	0.35	1.30	0.90	0.40	19	1	19
1432	4	5	907	2.9	0.20	1.25	0.85	0.40	15	1	15
1433	4	5	908	3.8	0.30	0.95	0.75	0.30	20	3	20
1434	4	5	909	3.5	0.20	1.50	0.90	0.40	19	1	19
1435	4	5	910	2.8	0.20	1.10	1.00	0.45	15	2	15
1436	4	5	911	5.9	0.50	2.00	1.00	0.45	22	1	22
1437	4	5	912	4.5	0.30	1.35	0.75	0.40	22	1	22
1438	4	5	913	1.8	0.05	0.75	0.50	0.25	13	4	13
1439	4	5	914	3.5	0.20	1.35	0.75	0.35	17	1	17
1440	4	5	915	2.8	0.15	1.05	0.70	0.35	17	2	17
1441	4	5	916	4.5	0.30	1.75	1.10	0.50	18	1	18
1442	4	5	917	3.1	0.20	1.00	0.70	0.50	16	1	16
1443	4	5	918	2.1	0.05	0.85	0.75	0.35	14	2	14
1444	4	5	919	2.5	0.20	0.95	0.80	0.40	14	1	14
1445	4	5	920	2.5	0.10	1.05	0.85	0.40	14	2	14
1446	4	5	921	1.9	0.10	0.85	0.70	0.30	13	2	13
1447	4	5	922	2.5	0.20	0.90	0.70	0.35	15	2	15
1448	4	5	923	2.5	0.15	0.95	0.85	0.40	16	3	16
1449	4	5	924	1.9	0.15	0.75	0.75	0.30	11	1	11
1450	4	5	925	2.2	0.15	0.80	0.80	0.35	12	2	12

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1451	4	5	926	2.8	0.20	1.15	0.90	0.40	15	3	15
1452	4	5	927	3.4	0.30	1.50	1.00	0.50	18	3	18
1453	4	5	928	3.5	0.10	1.50	0.80	0.40	19	3	19
1454	4	5	929	1.9	0.10	0.90	0.80	0.40	13	3	13
1455	4	5	930	2.5	0.20	0.90	0.75	0.35	15	3	15
1456	4	5	931	3.1	0.20	1.10	0.75	0.35	19	4	19
1457	4	5	932	2.3	0.10	0.95	0.85	0.40	14	3	14
1458	4	5	933	4.4	0.40	1.50	1.00	0.45	18	1	18
1459	4	5	934	2.7	0.30	1.20	0.70	0.30	21	3	21
1460	4	5	935	4.1	0.30	1.20	0.85	0.40	19	1	19
1461	4	5	936	3.7	0.20	1.40	1.00	0.40	19	3	19
1462	4	5	937	2.2	0.20	0.95	0.80	0.40	16	2	16
1463	4	5	938	2.5	0.10	1.00	0.90	0.50	16	2	16
1464	4	5	939	3.7	0.25	1.30	1.00	0.45	17	1	17
1465	4	5	940	1.9	0.20	0.80	0.50	0.35	14	2	14
1466	4	5	941	4.1	0.30	1.40	1.00	0.45	15	1	15
1467	4	5	942	3.3	0.15	1.40	1.15	0.55	18	1	18
1468	4	5	943	2.9	0.35	1.30	0.90	0.40	16	1	16
1469	4	5	944	3.4	0.10	1.20	1.00	0.50	15	1	15
1470	4	5	945	2.9	0.10	1.05	0.85	0.35	14	1	14
1471	4	5	946	3.3	0.10	1.40	0.90	0.50	19	1	19
1472	4	5	947	2.8	0.15	1.25	1.10	0.45	16	1	16
1473	4	5	948	4.2	0.30	1.25	0.90	0.45	20	1	20
1474	4	5	949	3.4	0.15	1.50	1.10	0.40	16	2	16
1475	4	5	950	2.2	0.10	0.90	0.60	0.30	15	1	15
1476	4	5	951	7.1	1.30	2.95	1.35	0.65	27	1	27
1477	4	5	952	1.4	0.10	0.60	0.65	0.30	9	1	9
1478	4	5	953	1.8	0.10	0.60	0.70	0.35	9	1	9
1479	4	5	954	2.6	0.15	0.90	0.70	0.35	14	1	14
1480	4	5	955	3.4	0.30	1.35	0.90	0.40	18	1	18
1481	4	5	956	1.5	0.00	0.65	0.75	0.40	8	2	8
1482	4	5	957	1.8	0.30	0.75	0.55	0.25	10	1	10
1483	4	5	958	1.2	0.00	0.50	0.65	0.30	9	2	9
1484	4	5	959	2.0	0.10	0.70	0.80	0.40	10	2	10
1485	4	5	960	2.7	0.10	0.85	0.90	0.45	11	3	11
1486	4	5	961	2.4	0.10	0.85	0.65	0.30	12	3	12
1487	4	5	962	4.0	0.25	1.25	0.80	0.40	18	1	18
1488	4	5	963	1.9	0.20	0.70	0.65	0.30	11	1	11
1489	4	5	964	1.7	0.05	0.60	0.55	0.30	9	1	9
1490	4	5	965	1.8	0.05	0.80	0.85	0.45	10	3	10
1491	4	5	966	2.5	0.50	0.70	0.80	0.35	14	4	14
1492	4	5	967	4.3	0.45	1.55	1.05	0.55	19	1	19
1493	4	5	968	2.9	0.30	0.60	0.70	0.30	17	3	17
1494	4	5	969	2.9	0.45	0.80	1.00	0.50	14	1	14
1495	4	5	970	2.5	0.25	0.80	0.60	0.30	14	2	14
1496	4	5	971	2.1	0.00	0.85	0.70	0.30	12	1	12
1497	4	5	972	1.8	0.10	0.75	0.70	0.35	11	3	11
1498	4	5	973	3.1	0.20	1.25	1.00	0.50	14	3	14
1499	4	5	974	2.0	0.15	0.75	0.80	0.40	12	1	12
1500	4	5	975	1.7	0.10	0.65	0.65	0.35	10	1	10

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1501	4	5	976	1.4	0.10	0.70	0.65	0.30	10	2	10
1502	4	5	977	1.9	0.10	0.70	0.70	0.35	11	3	11
1503	4	5	978	1.8	0.10	0.75	0.85	0.40	12	1	12
1504	4	5	979	1.9	0.15	0.80	0.80	0.45	11	3	11
1505	4	5	980	1.3	0.00	0.70	0.65	0.30	9	3	9
1506	4	5	981	1.5	0.00	0.60	0.60	0.25	11	1	11
1507	4	5	982	2.8	0.20	1.15	0.80	0.35	14	3	14
1508	4	5	983	2.9	0.20	1.10	0.70	0.30	15	2	15
1509	4	5	984	1.8	0.15	0.80	0.75	0.35	13	1	13
1510	4	5	985	3.0	0.20	1.05	0.90	0.45	15	3	15
1511	4	5	986	3.1	0.25	1.40	0.80	0.30	16	1	16
1512	4	5	987	2.5	0.20	0.90	0.85	0.40	13	1	13
1513	4	5	988	1.7	0.10	0.55	0.65	0.30	10	2	10
1514	4	5	989	2.0	0.20	0.65	0.65	0.30	10	1	10
1515	4	5	990	1.7	0.20	0.80	0.75	0.30	12	3	12
1516	4	5	991	2.3	0.15	0.90	0.80	0.45	13	1	13
1517	4	5	992	2.8	0.15	1.05	0.70	0.35	15	1	15
1518	4	5	993	3.0	0.25	0.95	0.80	0.40	13	1	13
1519	4	5	994	1.4	0.10	0.65	0.60	0.30	10	1	10
1520	4	5	995	1.5	0.10	0.65	0.60	0.30	10	1	10

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				S	D	H	S	R	R	S	C	C
	B	L	P	T	A	R	A	D	D	T	R	R
	O	O	L	T	H	T	P	0	5	N	T	P
	B	C	O	A	9	9	9	9	9	9	9	9
	S	K	T	G	2	2	2	2	2	2	2	2
1	1	1	1	0	7.2	1.85	1.70	0.10	0.05	40	17	40
2	1	1	1	9	7.4	1.60	1.60	0.20	0.10	41	14	41
3	1	1	18	0	7.4	2.40	1.55	0.35	0.20	44	16	44
4	1	1	24	0	8.3	2.80	1.60	0.30	0.15	46	26	46
5	1	1	30	0	5.6	1.40	1.10	0.20	0.25	39	23	39
6	1	1	35	2	6.9	2.05	1.60	0.25	0.10	41	27	41
7	1	1	38	0	5.8	2.10	0.40	0.30	0.15	37	16	37
8	1	1	43	0	7.7	1.80	1.65	0.30	0.15	42	20	42
9	1	1	48	0	7.1	1.90	1.75	0.20	0.10	39	26	39
10	1	1	57	0	6.7	1.70	1.90	0.20	0.10	36	17	36
11	1	1	62	0	7.3	2.35	1.50	0.25	0.15	39	12	39
12	1	1	70	0	7.2	1.80	1.65	0.35	0.20	41	26	41
13	1	2	73	0	8.9	2.70	1.45	0.20	0.10	49	25	49
14	1	2	80	0	7.2	1.15	2.70	0.25	0.10	46	21	46
15	1	2	86	2	6.3	1.70	1.25	0.20	0.10	43	29	43
16	1	2	89	0	6.6	1.50	1.15	0.20	0.10	38	18	38
17	1	2	94	1	6.3	1.65	0.95	0.10	0.05	40	24	40
18	1	2	98	0	6.1	1.90	0.85	0.25	0.10	32	19	32
19	1	2	106	0	6.4	1.65	1.65	0.30	0.15	40	18	40
20	1	2	110	1	7.9	2.10	1.90	0.30	0.15	41	24	41
21	1	2	113	2	5.9	1.60	1.30	0.20	0.10	43	26	43
22	1	2	117	0	8.6	2.10	2.40	0.40	0.15	48	17	48
23	1	2	126	0	6.4	1.65	1.10	0.20	0.10	44	11	44
24	1	2	136	0	6.3	1.05	1.70	0.15	0.05	38	19	38
25	1	2	145	0	7.5	1.45	1.85	0.20	0.10	39	7	39
26	1	2	154	0	6.6	1.65	1.35	0.20	0.10	36	16	36
27	1	2	161	0	6.9	1.65	1.30	0.25	0.10	39	20	39
28	1	3	163	0	6.5	1.30	1.70	0.25	0.10	40	20	40
29	1	3	170	0	6.5	2.10	1.60	0.25	0.15	39	20	39
30	1	3	175	0	4.1	0.95	0.80	0.10	0.10	37	21	37
31	1	3	181	0	5.5	2.35	0.80	0.10	0.05	36	26	36
32	1	3	187	0	6.1	1.55	1.55	0.15	0.05	32	15	32
33	1	3	194	0	6.6	1.60	2.10	0.20	0.10	42	25	42
34	1	3	199	0	6.5	1.55	1.15	0.15	0.10	39	9	39
35	1	3	208	0	6.3	1.70	1.55	0.10	0.05	41	25	41
36	1	3	210	1	6.3	1.80	0.95	0.15	0.05	45	23	45
37	1	3	215	0	5.5	0.95	1.05	0.15	0.10	37	25	37
38	1	3	220	0	5.8	1.45	1.70	0.20	0.10	38	23	38
39	1	3	225	0	6.9	1.80	1.45	0.15	0.05	41	22	41
40	1	3	230	0	7.5	1.25	2.85	0.25	0.10	43	25	43
41	1	3	235	0	7.2	1.25	1.80	0.15	0.05	43	19	43
42	1	4	236	0	7.7	1.70	1.40	0.20	0.10	48	30	48
43	1	4	241	0	7.6	2.15	0.95	0.20	0.10	49	29	49
44	1	4	243	2	6.2	2.30	1.95	0.15	0.05	42	31	42

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				S	D	H	S	R	R	S	C	C
	B	L	P	T	A	R	A	D	D	T	R	R
	O	O	L	T	H	T	P	0	5	N	T	P
	B	C	O	A	9	9	9	9	9	9	9	9
	S	K	T	G	2	2	2	2	2	2	2	2
45	1	4	247	0	6.4	1.75	0.80	0.30	0.15	45	26	45
46	1	4	252	2	5.8	1.65	2.00	0.40	0.15	40	26	40
47	1	4	253	0	7.8	1.80	1.25	0.25	0.10	45	21	45
48	1	4	258	0	4.8	0.90	1.05	0.15	0.05	35	22	35
49	1	4	263	0	5.9	1.05	1.30	0.20	0.10	41	27	41
50	1	4	264	1	8.1	1.80	1.40	0.25	0.15	42	28	42
51	1	4	269	0	6.4	1.55	1.25	0.25	0.10	42	22	42
52	1	4	270	2	5.8	1.50	1.15	0.15	0.05	39	24	39
53	1	4	272	2	3.5	0.95	0.75	0.20	0.10	34	27	34
54	1	4	276	0	7.8	1.90	1.35	0.15	0.10	44	19	44
55	1	4	281	0	8.8	1.95	2.35	0.30	0.15	54	29	54
56	1	4	286	0	7.2	1.25	1.50	0.10	0.05	43	20	43
57	1	4	291	0	7.2	2.05	1.40	0.35	0.15	42	21	42
58	1	4	296	0	4.1	0.95	0.95	0.20	0.10	35	16	35
59	1	4	302	0	6.6	1.55	1.20	0.15	0.05	39	20	39
60	1	4	307	2	6.2	1.75	1.55	0.10	0.25	42	20	42
61	1	4	308	1	9.4	2.10	1.35	0.20	0.10	50	34	50
62	1	4	309	0	5.7	1.15	1.10	0.15	0.05	38	20	38
63	1	4	312	2	6.7	1.75	1.95	0.25	0.10	45	31	45
64	1	4	317	0	7.7	1.65	1.25	0.20	0.10	47	25	47
65	1	4	322	0	8.2	2.05	1.90	0.30	0.15	47	27	47
66	2	1	327	0	6.3	1.85	1.25	0.20	0.10	36	15	36
67	2	1	330	2	4.9	1.60	0.85	0.10	0.05	36	20	36
68	2	1	333	2	5.0	1.25	0.95	0.10	0.05	33	16	33
69	2	1	339	2	5.0	1.50	0.85	0.10	0.05	34	22	34
70	2	1	341	0	5.3	1.70	1.10	0.20	0.05	35	10	35
71	2	1	350	0	3.9	1.10	0.85	0.10	0.15	30	13	30
72	2	1	353	2	5.2	1.65	1.30	0.30	0.15	37	20	37
73	2	1	363	0	5.4	1.60	0.90	0.05	0.15	31	14	31
74	2	1	370	0	3.9	1.00	0.60	0.10	0.05	31	13	31
75	2	1	372	2	5.3	1.45	0.85	0.20	0.10	32	13	32
76	2	1	377	0	4.2	1.50	0.75	0.15	0.05	30	7	30
77	2	1	386	2	3.1	0.65	0.70	0.15	0.10	26	14	26
78	2	1	387	0	4.8	1.50	0.95	0.20	0.10	31	8	31
79	2	1	396	0	4.3	1.65	0.80	0.10	0.05	33	12	33
80	2	1	401	1	6.0	2.10	0.00	0.15	0.05	35	20	35
81	2	1	406	0	7.9	2.10	1.10	0.15	0.05	40	6	40
82	2	1	415	0	6.1	1.60	1.15	0.20	0.10	36	8	36
83	2	1	427	0	6.7	2.10	1.00	0.20	0.10	37	16	37
84	2	1	433	2	6.0	1.75	1.00	0.10	0.05	37	24	37
85	2	1	434	0	7.1	1.90	1.20	0.20	0.10	40	14	40
86	2	1	442	0	4.5	0.85	1.00	0.15	0.05	33	11	33
87	2	1	449	0	4.9	1.30	0.75	0.10	0.05	31	12	31
88	2	1	456	0	7.7	2.00	1.55	0.20	0.10	42	12	42

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	P		A	B	R	A	1	0	L	H	T
O	O	L	T	T	H	T	P	0	5	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	2	2	2	2	2	2	2	2	2
89	2	1	464	0	3.6	0.60	0.70	0.10	0.05	28	13	28
90	2	2	475	0	4.8	0.75	1.45	0.15	0.05	32	14	32
91	2	2	479	2	3.9	1.00	0.80	0.10	0.05	32	20	32
92	2	2	481	0	5.5	1.30	1.10	0.20	0.10	33	15	33
93	2	2	487	0	6.5	2.00	0.95	0.20	0.10	40	14	40
94	2	2	488	2	3.7	0.75	1.00	0.10	0.05	30	20	30
95	2	2	493	0	6.5	1.85	0.95	0.10	0.05	40	6	40
96	2	2	498	0	5.5	0.65	1.35	0.20	0.10	36	20	36
97	2	2	506	0	5.6	0.90	1.55	0.10	0.05	39	23	39
98	2	2	507	2	4.1	1.45	0.55	0.10	0.05	34	23	34
99	2	2	513	2	5.5	1.50	1.00	0.15	0.05	39	23	39
100	2	2	514	0	5.5	1.35	0.80	0.10	0.05	32	11	32
101	2	2	519	2	5.3	1.65	0.75	0.10	0.05	36	23	36
102	2	2	521	0	5.6	1.10	0.85	0.20	0.10	36	6	36
103	2	2	526	0	7.4	1.80	1.10	0.30	0.10	46	20	46
104	2	2	533	2	5.3	1.50	0.90	0.05	0.00	37	25	37
105	2	2	537	2	4.2	1.25	1.10	0.20	0.10	29	21	29
106	2	2	539	0	4.9	1.40	1.00	0.15	0.05	32	14	32
107	2	2	542	2	4.0	0.95	0.65	0.15	0.05	31	15	31
108	2	2	545	0	5.6	1.30	0.90	0.10	0.05	35	8	35
109	2	2	546	1	5.8	2.00	1.00	0.10	0.05	40	20	40
110	2	2	557	0	3.2	0.70	0.40	0.10	0.05	28	12	28
111	2	2	564	0	6.5	2.00	1.15	0.10	0.05	36	14	36
112	2	2	568	1	5.8	2.25	0.75	0.15	0.10	38	19	38
113	2	2	570	0	6.2	1.45	1.25	0.20	0.10	40	13	40
114	2	2	577	0	3.9	1.15	0.60	0.10	0.05	30	20	30
115	2	2	578	2	4.9	1.45	0.75	0.10	0.05	32	19	32
116	2	2	583	0	5.4	1.20	0.85	0.15	0.05	36	17	36
117	2	2	587	2	4.9	0.95	1.25	0.25	0.10	28	15	28
118	2	2	589	0	5.9	1.80	0.80	0.15	0.05	37	12	37
119	2	2	596	0	7.9	2.25	1.50	0.10	0.05	46	8	46
120	2	2	601	2	4.4	1.25	1.05	0.15	0.05	36	15	36
121	2	2	602	2	6.3	1.75	0.90	0.15	0.05	40	23	40
122	2	2	605	0	5.7	1.25	0.75	0.10	0.05	38	21	38
123	2	2	610	2	5.3	1.70	0.85	0.20	0.10	36	18	36
124	2	2	613	0	5.7	1.25	0.95	0.15	0.05	36	14	36
125	2	2	616	2	4.3	1.25	0.70	0.10	0.05	32	18	32
126	2	2	621	0	5.6	1.50	1.35	0.20	0.10	38	15	38
127	2	3	632	0	6.3	1.60	1.00	0.20	0.10	41	8	44
128	2	3	638	0	6.6	1.40	1.10	0.15	0.10	41	12	41
129	2	3	646	0	5.1	1.55	0.75	0.15	0.10	32	18	32
130	2	3	652	0	6.1	1.95	1.15	0.15	0.10	34	11	34
131	2	3	657	0	7.4	2.25	2.35	0.20	0.10	42	11	42
132	2	3	662	0	6.2	1.45	0.90	0.15	0.05	38	17	38

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	P		A	B	R	A	1	0	L	H	T
O	O	L	T	T	H	T	P	0	5	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	2	2	2	2	2	2	2	2	2
133	2	3	668	0	5.8	1.10	1.15	0.20	0.10	35	14	35
134	2	3	673	0	6.5	1.40	1.60	0.25	0.10	41	20	41
135	2	3	688	0	6.4	1.30	1.10	0.20	0.10	33	13	33
136	2	3	702	0	5.6	1.45	0.65	0.20	0.10	32	6	32
137	2	3	713	0	5.3	1.40	0.85	0.15	0.05	37	21	37
138	2	3	718	0	5.7	1.55	0.95	0.25	0.10	36	17	36
139	2	3	726	0	5.3	0.65	1.60	0.25	0.10	42	5	42
140	2	3	734	0	7.1	1.80	1.30	0.25	0.10	33	6	33
141	2	4	747	0	6.3	1.80	1.20	0.15	0.05	35	12	35
142	2	4	754	0	5.3	0.95	1.40	0.25	0.10	33	15	33
143	2	4	760	0	4.7	1.15	1.10	0.20	0.10	30	11	30
144	2	4	769	0	5.0	1.30	0.95	0.20	0.10	35	13	35
145	2	4	774	0	4.6	1.45	0.65	0.10	0.05	32	10	32
146	2	4	783	0	4.4	1.30	1.10	0.15	0.05	33	13	33
147	2	4	790	0	5.1	1.80	0.75	0.15	0.05	32	11	37
148	2	4	795	0	6.6	1.75	1.55	0.30	0.15	34	15	34
149	2	4	801	0	4.9	1.30	1.05	0.20	0.10	33	11	33
150	2	4	811	0	4.8	1.60	0.60	0.30	0.15	32	13	32
151	2	4	821	0	6.5	2.00	1.50	0.35	0.15	38	10	38
152	2	4	827	0	5.5	1.25	1.15	0.25	0.10	36	15	36
153	2	4	832	0	4.8	1.30	0.90	0.20	0.10	32	13	32
154	2	4	838	0	5.8	1.35	1.40	0.30	0.15	32	13	13
155	2	4	843	0	4.4	1.10	0.75	0.15	0.05	31	11	31
156	3	1	1	0	6.1	0.85	2.40	0.55	0.25	34	11	34
157	3	1	7	0	6.8	0.95	2.05	0.60	0.30	36	7	36
158	3	1	13	0	7.5	0.85	2.90	0.80	0.35	38	7	38
159	3	1	18	0	8.3	1.40	1.65	0.55	0.20	39	6	39
160	3	1	24	0	5.8	0.80	1.80	0.70	0.30	31	3	31
161	3	1	29	0	5.9	0.90	1.65	0.75	0.35	28	5	28
162	3	1	36	0	4.4	0.50	1.20	0.55	0.25	23	5	23
163	3	1	41	0	4.4	0.55	1.60	0.85	0.35	21	4	21
164	3	1	46	0	4.9	0.50	1.90	0.45	0.20	30	5	30
165	3	1	52	0	3.6	0.30	1.00	0.45	0.20	22	5	22
166	3	1	58	0	9.3	1.30	2.80	0.60	0.30	34	4	34
167	3	1	63	0	4.7	0.95	1.20	0.60	0.25	25	4	25
168	3	1	69	0	4.7	0.70	1.25	0.45	0.20	28	5	28
169	3	2	70	0	4.3	1.10	0.75	1.10	0.55	21	4	21
170	3	2	75	0	3.2	0.30	1.20	0.90	0.45	18	1	18
171	3	2	80	0	5.0	0.90	1.50	0.90	0.35	26	3	26
172	3	2	85	0	6.1	0.65	2.00	0.90	0.40	26	4	26
173	3	2	90	0	3.7	0.40	1.40	0.70	0.40	28	4	28
174	3	2	95	0	4.3	1.50	0.55	0.90	0.40	22	4	22
175	3	2	101	0	8.4	1.15	2.30	0.85	0.35	37	7	37
176	3	2	107	0	7.3	2.25	1.10	0.60	0.25	32	5	32

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	B	P	T	S	D	H	S	R	R	S	C	C
	L	O	A	A	B	R	A	A	D	M	R	R
O	O	L	T	T	H	T	P	1	0	L	H	T
B	C	O	A	9	9	9	9	9	5	N	T	P
S	K	T	G	2	2	2	2	2	2	2	2	2
177	3	2	112	0	1.8	0.10	0.80	0.65	0.35	11	1	11
178	3	2	117	0	2.4	0.85	0.40	0.40	0.20	16	2	16
179	3	2	122	0	5.1	0.95	1.30	0.40	0.20	29	7	29
180	3	2	127	0	5.6	1.30	1.10	0.50	0.25	27	4	27
181	3	2	132	0	9.1	1.20	2.60	0.75	0.30	36	2	36
182	3	2	137	0	7.0	0.90	1.75	0.55	0.30	34	6	34
183	3	2	142	0	4.5	0.70	1.30	0.40	0.20	30	7	30
184	3	2	147	0	4.2	1.20	0.50	0.40	0.25	28	11	28
185	3	2	152	0	5.7	0.95	1.50	0.55	0.20	33	5	33
186	3	2	157	0	5.4	0.80	1.50	0.60	0.35	32	9	32
187	3	2	162	0	5.1	1.00	1.15	0.35	0.15	30	9	30
188	3	2	167	0	5.7	0.70	1.95	0.45	0.20	35	9	35
189	3	2	172	0	6.6	2.10	1.70	0.55	0.25	42	10	42
190	3	3	177	0	5.1	0.85	1.45	0.85	0.40	21	4	21
191	3	3	184	0	3.5	0.65	1.05	0.70	0.35	23	7	23
192	3	3	190	0	5.0	0.75	1.50	0.80	0.40	27	4	27
193	3	3	198	0	4.8	0.80	1.80	0.40	0.20	21	6	21
194	3	3	205	0	2.7	0.20	1.15	0.75	0.35	18	3	18
195	3	3	210	0	2.8	0.15	1.20	0.55	0.25	17	3	17
196	3	3	216	0	5.2	0.60	1.65	0.65	0.35	30	3	30
197	3	3	222	0	8.5	1.55	1.95	0.55	0.25	39	4	39
198	3	3	229	0	7.8	1.50	1.55	0.50	0.25	41	5	41
199	3	3	236	0	4.8	0.95	1.45	0.70	0.30	22	4	22
200	3	3	241	0	2.7	0.40	0.85	0.45	0.20	20	4	20
201	3	3	246	0	7.3	1.00	2.00	0.50	0.25	37	6	37
202	3	3	253	0	4.6	0.85	0.95	0.65	0.25	21	3	21
203	3	3	260	0	2.9	0.25	0.90	0.50	0.25	16	3	16
204	3	3	265	0	5.8	0.70	2.00	0.50	0.25	31	6	31
205	3	4	267	0	4.1	0.75	1.65	0.55	0.25	28	7	28
206	3	4	272	0	4.9	1.05	1.50	0.40	0.15	32	9	32
207	3	4	278	0	2.0	0.05	0.80	0.60	0.25	13	2	13
208	3	4	283	0	5.9	1.00	1.90	0.75	0.30	28	5	28
209	3	4	288	0	4.5	1.20	0.80	0.70	0.35	26	5	26
210	3	4	293	0	6.4	0.75	1.95	0.60	0.30	39	8	39
211	3	4	298	0	3.2	0.25	1.20	0.60	0.25	21	3	21
212	3	4	303	0	5.0	0.40	2.15	0.75	0.30	27	5	27
213	3	4	309	0	4.5	0.75	1.65	0.70	0.35	31	5	31
214	3	4	314	0	8.4	2.05	2.15	0.65	0.30	37	6	37
215	3	4	319	0	6.0	0.70	2.30	0.80	0.35	31	5	31
216	3	4	324	0	2.6	0.20	1.10	0.45	0.20	18	4	18
217	3	4	329	0	7.8	1.20	1.95	0.50	0.25	34	5	34
218	3	4	334	0	3.9	0.35	1.40	0.85	0.40	25	4	25
219	3	4	339	0	5.2	1.20	1.40	0.55	0.25	30	4	30
220	3	5	342	0	5.9	0.55	1.95	0.45	0.20	27	4	27

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	B	P	T	S	D	H	S	R	R	S	C	C
	L	O	A	A	B	R	A	A	D	M	R	R
O	O	L	T	T	H	T	P	1	0	L	H	T
B	C	O	A	9	9	9	9	9	5	N	T	P
S	K	T	G	2	2	2	2	2	2	2	2	2
221	3	5	347	0	4.5	0.60	1.20	0.50	0.25	26	4	26
222	3	5	352	0	2.4	0.10	1.05	0.65	0.30	17	3	17
223	3	5	357	0	5.1	0.55	1.65	0.70	0.30	22	3	22
224	3	5	362	0	4.3	0.55	1.20	0.70	0.30	22	3	22
225	3	5	367	0	6.3	0.70	2.90	0.55	0.25	21	2	21
226	3	5	372	0	4.5	0.40	1.70	0.65	0.30	25	3	25
227	3	5	377	0	1.6	0.05	0.65	0.65	0.30	9	1	9
228	3	5	382	0	1.8	0.15	0.70	0.50	0.25	14	2	14
229	3	5	387	0	4.2	0.60	1.35	0.60	0.30	21	2	21
230	3	5	392	0	4.0	0.70	1.15	0.50	0.25	24	5	24
231	3	5	397	0	3.0	1.20	0.65	0.80	0.45	24	2	24
232	3	5	402	0	6.5	0.75	2.20	0.70	0.35	31	6	31
233	3	5	407	0	2.0	0.05	1.00	0.50	0.25	19	6	19
234	3	5	412	0	4.1	1.10	0.75	0.45	0.25	21	3	21
235	3	5	417	0	2.4	0.25	0.70	0.45	0.20	19	6	19
236	3	5	422	0	3.4	0.50	1.30	0.75	0.35	21	5	21
237	3	5	427	0	2.6	0.25	0.90	0.60	0.30	18	3	18
238	3	5	432	0	3.2	0.30	1.10	0.60	0.30	24	4	24
239	4	1	434	0	6.2	0.80	2.45	0.85	0.35	27	4	27
240	4	1	439	0	4.0	0.65	1.15	0.50	0.25	27	6	27
241	4	1	444	0	4.9	0.70	1.40	0.50	0.20	29	9	29
242	4	1	449	0	4.0	0.40	1.00	0.30	0.15	30	6	30
243	4	1	454	0	2.3	0.35	0.70	0.25	0.10	26	10	26
244	4	1	459	0	5.4	0.65	1.40	0.55	0.25	22	2	22
245	4	1	460	2	4.7	1.00	0.95	0.70	0.30	27	4	27
246	4	1	465	0	4.2	0.65	1.50	0.55	0.25	28	9	28
247	4	1	470	0	6.4	0.80	2.10	0.75	0.30	22	2	22
248	4	1	475	0	3.6	0.40	1.20	0.45	0.25	27	12	27
249	4	1	480	0	4.3	0.40	1.65	0.70	0.30	26	4	26
250	4	1	485	0	3.0	0.55	0.70	0.25	0.10	27	10	27
251	4	1	490	0	4.8	0.80	1.30	0.75	0.35	20	1	20
252	4	1	495	0	2.6	0.35	0.70	0.35	0.15	20	6	20
253	4	1	500	0	5.0	0.70	1.30	0.55	0.25	26	3	26
254	4	1	506	0	3.9	0.25	1.60	1.00	0.50	23	3	23
255	4	1	511	0	6.3	0.75	2.40	0.80	0.30	25	2	25
256	4	1	516	0	2.1	0.20	0.75	0.55	0.25	15	2	15
257	4	1	524	0	3.1	0.15	1.20	0.45	0.25	26	6	26
258	4	1	529	0	3.5	0.25	1.25	0.55	0.30	27	6	27
259	4	1	534	0	4.6	0.25	1.70	0.90	0.40	19	3	19
260	4	2	537	0	4.5	0.55	1.35	0.45	0.20	24	5	24
261	4	2	546	0	3.6	0.40	1.15	0.60	0.25	21	2	21
262	4	2	554	0	4.8	0.80	1.25	0.80	0.35	27	4	27
263	4	2	561	1	1.9	0.05	0.90	0.60	0.30	17	2	9
264	4	2	563	0	4.3	0.55	1.35	0.85	0.35	21	2	21

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	P		A	B	R	A	D	D	M	N	N
O	L	L	T	T	H	T	P	1	0	L	H	T
B	O	O	A	9	9	9	9	9	5	N	T	P
S	K	T	G	2	2	2	2	2	2	2	2	2
265	4	2	568	0	4.7	0.80	1.40	0.75	0.35	26	3	26
266	4	2	574	0	1.9	0.30	0.50	0.45	0.20	14	4	14
267	4	2	579	0	3.4	0.35	1.40	0.65	0.30	21	5	21
268	4	2	587	0	3.4	0.35	1.05	0.75	0.30	19	4	19
269	4	2	593	0	2.7	0.55	0.80	0.65	0.35	21	2	21
270	4	2	599	0	3.4	0.25	1.40	0.70	0.35	16	1	16
271	4	2	608	0	2.3	0.20	0.85	0.65	0.30	15	3	15
272	4	2	615	0	3.1	0.35	0.95	0.35	0.15	22	6	22
273	4	2	620	0	4.5	0.40	1.55	0.90	0.40	21	1	21
274	4	2	628	0	4.6	0.75	1.45	0.85	0.40	27	3	27
275	4	2	633	0	4.2	0.60	1.25	0.75	0.35	20	1	20
276	4	2	640	0	4.0	0.35	1.20	0.45	0.20	23	6	23
277	4	2	647	0	2.1	0.20	0.55	0.30	0.15	17	5	17
278	4	3	651	0	5.4	0.80	1.60	0.90	0.45	29	4	29
279	4	3	656	0	2.9	0.45	1.00	0.70	0.35	19	3	19
280	4	3	661	0	5.4	0.65	2.00	1.20	0.45	19	1	19
281	4	3	666	0	4.4	0.50	1.50	0.95	0.50	18	1	18
282	4	3	671	0	3.0	0.30	1.20	0.80	0.35	18	3	18
283	4	3	676	0	2.5	0.20	1.05	0.75	0.30	18	4	18
284	4	3	682	0	2.9	0.25	1.30	0.70	0.30	17	4	17
285	4	3	687	0	3.3	0.15	1.60	0.85	0.40	18	4	18
286	4	3	693	0	2.6	0.45	0.70	0.70	0.35	17	5	17
287	4	3	698	0	4.0	0.65	1.05	0.70	0.35	22	5	22
288	4	3	703	0	2.6	0.40	0.60	0.40	0.25	19	6	19
289	4	3	708	0	3.4	0.35	1.15	0.80	0.40	19	4	19
290	4	3	713	0	3.2	0.25	1.05	0.70	0.30	18	4	18
291	4	3	718	0	3.8	0.65	1.10	0.75	0.40	21	4	21
292	4	3	723	0	3.4	0.30	1.40	0.90	0.40	20	1	20
293	4	3	728	0	5.0	0.60	2.00	1.15	0.55	22	4	22
294	4	3	733	0	3.0	0.20	1.10	0.60	0.30	18	5	18
295	4	3	738	0	3.5	0.35	1.05	0.70	0.35	17	4	17
296	4	3	743	0	3.0	0.35	1.10	0.70	0.30	15	4	15
297	4	3	748	0	5.0	0.65	1.30	0.90	0.35	22	2	20
298	4	3	753	0	3.7	0.35	1.15	0.65	0.30	18	4	18
299	4	3	758	0	2.6	0.20	0.95	0.80	0.35	15	4	15
300	4	3	763	0	3.6	0.25	1.10	0.75	0.40	18	3	18
301	4	3	768	0	2.5	0.15	0.90	0.90	0.35	15	3	15
302	4	4	772	0	2.8	0.25	1.10	0.70	0.30	18	3	18
303	4	4	779	0	3.4	0.45	1.00	0.90	0.40	14	2	14
304	4	4	786	0	5.6	0.50	1.80	1.15	0.50	25	3	25
305	4	4	793	0	3.6	0.35	1.00	0.75	0.40	17	3	17
306	4	4	799	0	3.0	0.40	0.80	0.80	0.45	18	1	18
307	4	4	806	0	4.0	0.45	1.90	1.35	0.75	21	4	21
308	4	4	811	0	3.5	0.35	1.10	0.90	0.45	17	2	17

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	P		A	B	R	A	D	D	M	N	N
O	L	L	T	T	H	T	P	1	0	L	H	T
B	O	O	A	9	9	9	9	9	5	N	T	P
S	K	T	G	2	2	2	2	2	2	2	2	2
309	4	4	817	0	4.8	0.80	1.65	1.15	0.50	21	2	21
310	4	4	825	0	4.2	0.60	1.70	0.95	0.35	20	1	20
311	4	4	835	0	6.0	0.70	2.40	1.25	0.50	29	1	29
312	4	4	842	0	3.3	0.15	1.25	0.60	0.25	18	1	18
313	4	4	850	0	5.1	0.20	2.05	1.00	0.40	20	2	20
314	4	4	856	0	3.1	0.50	0.85	0.60	0.25	20	4	20
315	4	4	862	0	3.7	0.45	1.20	0.85	0.40	18	3	18
316	4	4	867	0	2.9	0.50	0.95	0.75	0.35	18	4	18
317	4	4	874	0	2.9	0.50	0.95	0.95	0.50	16	3	16
318	4	4	879	0	4.0	0.40	1.25	0.85	0.45	20	1	20
319	4	5	884	0	4.7	0.90	1.65	1.20	0.60	22	2	22
320	4	5	889	0	3.6	0.25	1.35	0.80	0.40	20	1	20
321	4	5	894	0	2.2	0.30	0.80	0.70	0.40	14	3	14
322	4	5	899	0	3.3	0.70	0.70	0.90	0.45	16	3	16
323	4	5	904	0	2.8	0.30	1.00	0.75	0.35	16	4	16
324	4	5	909	0	3.9	0.40	1.45	0.90	0.40	19	1	19
325	4	5	914	0	4.0	0.40	1.55	0.90	0.40	18	1	18
326	4	5	919	0	2.8	0.25	1.25	0.80	0.35	14	1	14
327	4	5	924	0	2.3	0.20	0.75	0.70	0.20	13	1	13
328	4	5	929	0	2.0	0.15	0.75	0.60	0.25	14	4	14
329	4	5	934	0	3.1	0.35	1.15	0.95	0.35	22	4	22
330	4	5	939	0	4.3	0.35	1.35	0.80	0.30	18	1	18
331	4	5	944	0	4.1	0.15	1.40	1.00	0.50	16	1	16
332	4	5	949	0	3.8	0.15	1.55	0.95	0.35	17	2	17
333	4	5	954	0	2.8	0.30	1.00	0.70	0.35	14	4	14
334	4	5	959	0	2.3	0.20	0.85	0.60	0.30	11	3	11
335	4	5	964	0	2.0	0.20	0.55	0.60	0.30	9	1	9
336	4	5	969	0	3.5	0.45	1.05	1.00	0.50	15	1	15
337	4	5	974	0	2.4	0.20	0.80	0.70	0.30	13	3	13
338	4	5	979	0	2.3	0.20	1.20	0.85	0.40	13	4	13
339	4	5	984	0	2.2	0.10	1.15	0.65	0.35	14	2	14
340	4	5	989	0	2.4	0.15	0.95	0.80	0.35	11	1	11
341	4	5	994	0	1.8	0.10	0.70	0.80	0.25	10	1	10

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
				A	B	R	A	D	D	M	N	N
O	B	P	A	T	H	T	P	1	0	L	T	P
S	C	O	G	3	3	3	3	3	3	3	3	3
1	1	1	2	0	7.1	1.90	1.25	0.10	0.05	40	13	40
2	1	1	10	0	6.5	2.05	1.10	0.10	0.05	38	14	38
3	1	1	19	0	8.7	1.75	2.25	0.15	0.10	44	12	44
4	1	1	25	0	9.6	2.95	1.85	0.30	0.15	49	18	49
5	1	1	32	0	7.8	1.80	2.25	0.25	0.15	41	22	41
6	1	1	40	0	6.7	1.90	1.55	0.10	0.05	37	22	37
7	1	1	45	0	6.7	1.75	1.45	0.15	0.05	38	19	32
8	1	1	52	0	7.5	1.60	2.10	0.30	0.15	37	16	37
9	1	1	59	0	9.0	3.50	1.70	0.25	0.10	42	19	42
10	1	1	65	0	5.5	1.50	0.95	0.20	0.10	39	14	39
11	1	2	73	2	8.9	2.35	1.60	0.15	0.05	41	19	41
12	1	2	75	0	7.7	1.70	1.20	0.10	0.05	42	24	42
13	1	2	82	0	8.9	1.95	0.75	0.15	0.05	46	23	46
14	1	2	90	0	6.6	1.45	1.35	0.20	0.10	38	10	38
15	1	2	94	2	6.4	1.50	0.90	0.10	0.05	40	22	40
16	1	2	99	0	7.9	1.65	1.15	0.20	0.10	40	13	40
17	1	2	107	0	7.2	1.25	1.55	0.20	0.10	44	21	44
18	1	2	110	2	7.8	2.00	1.50	0.20	0.10	43	21	43
19	1	2	118	0	6.4	1.75	1.95	0.30	0.15	36	14	36
20	1	2	128	0	6.4	1.40	1.20	0.30	0.15	37	8	37
21	1	2	137	0	7.7	1.25	1.65	0.30	0.15	47	17	47
22	1	2	147	0	7.0	1.70	1.50	0.15	0.05	41	8	40
23	1	2	155	0	8.1	1.65	1.50	0.30	0.15	42	11	42
24	1	3	164	0	7.1	1.75	1.00	0.20	0.10	38	16	38
25	1	3	171	0	5.2	1.10	0.80	0.15	0.10	32	15	32
26	1	3	176	0	5.2	1.10	0.95	0.20	0.10	30	16	30
27	1	3	182	0	6.6	1.50	1.50	0.25	0.10	36	9	36
28	1	3	188	0	5.9	1.25	1.45	0.20	0.10	41	20	41
29	1	3	195	0	4.2	1.15	0.75	0.10	0.05	32	17	32
30	1	3	201	0	7.5	1.55	1.75	0.25	0.10	41	22	41
31	1	3	209	0	6.1	1.30	1.35	0.20	0.10	38	20	38
32	1	3	210	1	6.2	1.90	0.95	0.25	0.10	40	17	40
33	1	3	216	0	5.4	1.35	1.20	0.20	0.10	35	19	35
34	1	3	221	0	6.6	1.95	1.25	0.25	0.10	38	18	38
35	1	3	226	0	6.4	1.65	1.00	0.20	0.10	39	17	39
36	1	3	231	0	4.1	0.90	0.70	0.15	0.05	32	14	32
37	1	4	237	0	6.4	1.35	1.45	0.10	0.05	38	19	38
38	1	4	242	0	7.7	1.80	1.40	0.20	0.10	42	20	42
39	1	4	248	0	7.5	1.35	1.90	0.30	0.15	45	20	45
40	1	4	254	0	6.9	2.40	2.30	0.15	0.05	41	28	41
41	1	4	259	0	5.0	1.25	0.65	0.15	0.05	36	22	36
42	1	4	264	2	7.9	2.00	1.50	0.25	0.10	42	24	42
43	1	4	265	0	5.7	1.05	1.20	0.15	0.05	39	18	39
44	1	4	266	2	6.6	1.55	1.85	0.15	0.05	40	19	40

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				S				R	R	S	C	C
	B	P		T	D	H	S	A	A	T	R	R
	L	O		A	B	R	A	D	D	M	N	N
O	C	L	T	T	H	T	P	1	0	L	H	T
B	O	O	A	9	9	9	9	9	9	N	T	P
S	K	T	G	3	3	3	3	3	3	3	3	3
45	1	4	273	0	8.4	1.75	1.40	0.20	0.10	45	25	45
46	1	4	278	0	7.3	1.60	1.40	0.15	0.05	42	21	42
47	1	4	279	1	9.0	3.35	0.55	0.20	0.10	42	21	42
48	1	4	284	0	8.7	2.20	1.70	0.20	0.10	44	22	44
49	1	4	285	2	5.4	1.15	1.00	0.30	0.15	38	19	38
50	1	4	290	0	7.7	1.80	1.35	0.25	0.10	44	27	44
51	1	4	295	0	7.3	1.80	1.40	0.20	0.10	44	23	44
52	1	4	301	0	8.6	1.60	2.00	0.30	0.15	48	26	48
53	1	4	306	0	7.2	2.55	1.10	0.30	0.10	41	22	41
54	1	4	308	2	9.3	2.40	1.50	0.45	0.20	48	29	48
55	1	4	314	0	8.0	1.65	2.00	0.35	0.15	47	22	47
56	1	4	319	0	7.3	1.55	1.40	0.25	0.10	36	18	36
57	1	4	324	0	5.7	1.30	1.25	0.35	0.20	40	22	40
58	2	1	328	0	8.2	2.65	0.90	0.20	0.10	43	14	43
59	2	1	332	2	4.8	1.45	0.85	0.10	0.05	30	15	30
60	2	1	344	0	4.6	1.15	0.70	0.10	0.05	29	19	29
61	2	1	356	0	3.4	0.95	0.60	0.10	0.05	29	20	29
62	2	1	366	0	8.2	2.05	1.50	0.25	0.10	38	6	38
63	2	1	373	0	6.5	1.90	0.75	0.10	0.05	33	11	33
64	2	1	381	0	4.3	0.90	0.85	0.15	0.05	33	7	33
65	2	1	391	0	5.7	1.20	0.95	0.15	0.05	40	13	40
66	2	1	399	2	3.6	0.65	0.70	0.10	0.05	28	17	28
67	2	1	400	0	5.6	1.30	0.90	0.15	0.05	33	15	33
68	2	1	401	2	6.3	1.65	0.90	0.20	0.10	35	19	35
69	2	1	411	0	8.4	2.55	1.15	0.20	0.10	39	14	39
70	2	1	422	0	6.1	1.45	1.25	0.20	0.10	39	13	39
71	2	1	430	0	6.5	1.70	1.15	0.20	0.10	41	15	41
72	2	1	431	2	3.6	0.85	0.70	0.15	0.10	29	16	29
73	2	1	440	0	6.4	1.70	1.05	0.20	0.10	30	8	30
74	2	1	444	2	5.3	1.30	0.90	0.10	0.05	33	16	33
75	2	1	450	0	5.4	1.30	1.30	0.30	0.15	34	16	34
76	2	1	457	0	7.1	1.60	1.75	0.40	0.25	40	4	40
77	2	1	465	0	8.2	2.10	1.85	0.40	0.20	42	16	42
78	2	2	476	0	5.3	1.55	1.30	0.15	0.05	34	11	34
79	2	2	482	0	3.7	0.90	0.70	0.10	0.05	29	14	29
80	2	2	489	0	6.8	2.15	1.50	0.30	0.10	38	9	38
81	2	2	494	0	6.5	1.60	1.60	0.30	0.15	48	15	48
82	2	2	500	0	4.2	1.50	0.70	0.20	0.10	32	15	32
83	2	2	509	0	5.5	1.40	1.05	0.20	0.10	34	20	34
84	2	2	514	2	5.9	1.35	1.05	0.10	0.05	31	8	31
85	2	2	516	0	3.0	0.80	0.55	0.10	0.05	24	5	24
86	2	2	523	0	4.8	1.30	0.90	0.15	0.05	40	25	40
87	2	2	529	2	2.8	0.60	0.80	0.10	0.05	26	11	26
88	2	2	530	0	6.4	2.15	1.00	0.15	0.05	36	16	36

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	B	L	P	S	D	H	S	R	R	S	C	C
	O	O	L	T	A	B	R	A	A	T	R	R
	B	C	O	A	9	9	9	9	9	9	9	9
	S	K	T	G	3	3	3	3	3	3	3	3
89	2	2	531	2	3.0	0.75	0.60	0.10	0.050	29	15	29
90	2	2	534	2	4.1	1.25	0.75	0.15	0.100	33	15	33
91	2	2	540	2	5.3	1.20	0.65	0.10	0.050	30	15	30
92	2	2	541	0	6.2	1.60	0.85	0.10	0.050	37	6	37
93	2	2	546	2	5.7	2.00	0.65	0.15	0.050	40	22	40
94	2	2	549	0	5.8	0.85	1.75	0.10	0.050	33	16	33
95	2	2	559	0	8.1	1.90	1.40	0.10	0.050	45	17	45
96	2	2	566	0	6.3	1.50	1.10	0.20	0.100	37	17	37
97	2	2	567	2	5.8	1.45	1.20	0.20	0.100	37	18	37
98	2	2	568	2	5.7	1.80	0.95	0.10	0.050	36	18	36
99	2	2	574	0	3.7	1.10	0.45	0.05	0.025	29	19	29
100	2	2	580	2	5.4	2.05	0.60	0.25	0.100	32	13	32
101	2	2	582	0	3.5	1.20	0.50	0.10	0.050	30	14	30
102	2	2	588	0	6.0	1.00	1.40	0.25	0.150	37	11	37
103	2	2	593	2	5.6	2.00	0.70	0.10	0.050	36	12	36
104	2	2	597	0	7.3	2.20	0.70	0.10	0.050	36	3	36
105	2	2	606	0	4.7	1.00	0.95	0.15	0.050	36	20	36
106	2	2	612	2	5.7	1.90	0.90	0.10	0.050	40	17	40
107	2	2	617	0	3.4	0.95	0.60	0.05	0.025	29	17	29
108	2	3	625	0	7.1	1.90	1.20	0.15	0.050	36	18	36
109	2	3	633	0	7.6	1.80	1.45	0.25	0.100	36	7	36
110	2	3	639	0	8.4	2.30	1.05	0.15	0.050	47	20	47
111	2	3	647	0	5.8	1.60	1.05	0.20	0.100	32	8	32
112	2	3	653	0	5.3	1.40	0.60	0.10	0.050	35	12	35
113	2	3	658	0	7.1	1.50	1.15	0.20	0.100	40	15	40
114	2	3	663	0	5.7	1.60	1.05	0.20	0.100	37	21	37
115	2	3	669	0	5.7	1.60	0.65	0.10	0.050	39	21	39
116	2	3	674	0	7.2	1.80	1.60	0.40	0.200	40	18	40
117	2	3	696	0	5.5	1.50	1.00	0.10	0.050	38	12	38
118	2	3	703	0	7.0	1.40	1.55	0.25	0.100	36	12	36
119	2	3	714	0	6.4	1.50	1.30	0.15	0.050	38	20	38
120	2	3	719	0	6.2	1.65	0.85	0.20	0.100	36	21	36
121	2	3	727	0	5.1	1.90	0.40	0.10	0.050	34	20	34
122	2	3	737	0	6.4	1.30	1.25	0.10	0.050	35	19	35
123	2	4	742	0	3.6	0.80	0.65	0.15	0.050	29	16	29
124	2	4	748	2	7.7	2.15	1.05	0.20	0.100	40	23	40
125	2	4	749	0	4.8	0.95	0.80	0.10	0.050	32	19	32
126	2	4	757	0	5.8	0.50	1.85	0.15	0.050	35	14	35
127	2	4	766	0	5.1	1.20	1.20	0.15	0.050	35	20	35
128	2	4	771	0	4.9	1.10	0.95	0.20	0.100	36	24	36
129	2	4	776	0	4.5	0.90	1.00	0.20	0.100	31	14	31
130	2	4	786	0	4.7	1.20	1.10	0.15	0.050	32	13	32
131	2	4	792	0	6.4	1.70	1.15	0.20	0.100	37	11	37
132	2	4	797	0	5.6	1.05	0.80	0.15	0.050	35	20	35

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	B	L	P	S	D	H	S	R	R	S	C	C
	O	O	L	T	A	B	R	A	A	T	R	R
	B	C	O	A	9	9	9	9	9	9	9	9
	S	K	T	G	3	3	3	3	3	3	3	3
133	2	4	806	0	4.5	1.00	0.80	0.15	0.05	31	17	31
134	2	4	816	0	4.5	1.20	0.90	0.10	0.05	31	6	31
135	2	4	824	0	5.2	1.35	1.30	0.15	0.05	33	16	33
136	2	4	829	0	5.8	1.15	1.15	0.20	0.10	36	14	36
137	2	4	834	0	5.1	1.40	1.35	0.35	0.20	35	19	35
138	2	4	840	0	4.5	1.00	0.65	0.15	0.05	29	18	29
139	2	4	846	0	4.9	0.90	0.90	0.10	0.05	34	19	34
140	3	1	3	0	6.5	1.25	1.75	0.25	0.15	36	8	36
141	3	1	8	0	4.3	0.85	1.00	0.25	0.20	26	6	26
142	3	1	14	0	8.4	0.85	2.90	0.60	0.30	31	3	31
143	3	1	20	0	7.1	1.15	1.10	0.25	0.15	33	5	33
144	3	1	25	0	5.4	0.45	1.50	0.55	0.25	26	4	26
145	3	1	30	0	2.6	0.00	1.05	0.35	0.25	15	2	15
146	3	1	37	0	3.1	0.55	0.90	0.55	0.20	20	3	20
147	3	1	42	0	4.1	0.30	1.85	0.55	0.30	20	5	20
148	3	1	47	0	1.9	0.25	0.70	0.60	0.30	12	3	12
149	3	1	53	0	3.4	0.55	0.85	0.60	0.30	22	3	22
150	3	1	59	0	5.0	0.55	1.25	0.30	0.10	25	6	25
151	3	1	65	0	3.4	0.15	1.25	0.55	0.30	15	4	15
152	3	2	71	0	2.7	0.55	0.65	0.75	0.35	15	2	15
153	3	2	76	0	5.9	1.65	0.65	0.75	0.35	24	3	24
154	3	2	81	0	2.8	0.00	1.20	0.80	0.40	14	1	14
155	3	2	86	0	7.6	1.30	2.20	0.70	0.30	37	8	37
156	3	2	91	0	7.6	0.65	2.45	0.65	0.30	37	6	37
157	3	2	96	0	8.6	1.90	2.55	0.80	0.35	31	6	31
158	3	2	103	0	9.4	1.60	2.40	0.60	0.25	37	3	37
159	3	2	108	0	8.8	1.60	2.30	0.75	0.35	40	9	40
160	3	2	113	0	7.0	0.60	1.95	0.70	0.30	32	2	32
161	3	2	118	0	8.5	1.65	2.30	0.60	0.25	37	5	37
162	3	2	123	0	6.8	1.20	1.55	0.50	0.20	34	5	34
163	3	2	128	0	3.4	0.40	0.95	0.35	0.15	26	11	26
164	3	2	133	0	7.9	1.90	1.50	0.45	0.20	33	4	33
165	3	2	138	0	4.0	0.45	1.25	0.35	0.15	25	3	25
166	3	2	143	0	5.9	1.50	0.85	0.40	0.15	34	6	34
167	3	2	148	0	5.5	1.05	1.25	0.45	0.15	31	5	31
168	3	2	153	0	2.9	0.45	1.00	0.45	0.20	24	6	24
169	3	2	158	0	7.3	1.35	2.15	0.55	0.25	33	8	33
170	3	2	163	0	2.6	0.00	1.05	0.40	0.15	18	4	18
171	3	2	168	0	7.6	0.65	2.00	0.35	0.15	36	6	36
172	3	2	173	0	7.1	1.10	1.75	0.35	0.15	39	7	39
173	3	3	180	0	5.2	0.65	1.75	0.80	0.25	24	3	24
174	3	3	186	0	2.9	0.30	0.90	0.40	0.20	20	3	20
175	3	3	193	0	5.7	1.35	1.40	0.30	0.10	29	7	29
176	3	3	200	0	3.1	0.30	1.00	0.65	0.25	19	3	19

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	B	L	P	T	D	H	S	R	R	S	C	C
	O	B	S	A	B	T	A	A	D	M	N	N
	O	B	S	A	B	T	A	A	D	M	N	N
177	3	3	206	0	5.2	0.65	1.50	0.75	0.30	27	2	27
178	3	3	211	0	5.0	0.80	1.45	0.55	0.25	22	3	22
179	3	3	217	0	3.3	0.35	1.00	0.65	0.25	17	2	17
180	3	3	223	0	7.1	1.10	1.90	0.45	0.20	43	16	43
181	3	3	232	0	3.4	0.45	1.00	0.55	0.25	21	4	21
182	3	3	237	0	4.9	1.15	0.95	0.40	0.20	27	4	27
183	3	3	242	0	3.9	0.80	0.95	0.45	0.20	23	7	23
184	3	3	247	0	6.3	0.90	1.75	0.40	0.20	36	5	36
185	3	3	254	0	3.3	0.45	0.95	0.65	0.30	20	3	20
186	3	3	261	0	5.2	0.65	1.40	0.55	0.30	25	7	25
187	3	3	266	0	8.1	0.85	2.35	0.45	0.15	34	7	34
188	3	4	268	0	5.5	1.40	1.05	0.30	0.10	31	11	31
189	3	4	273	0	7.0	0.60	2.10	0.45	0.20	34	7	34
190	3	4	279	0	2.2	0.15	0.85	0.45	0.20	16	4	16
191	3	4	284	0	9.2	1.25	2.40	0.60	0.25	35	5	35
192	3	4	289	0	4.4	0.35	1.55	0.60	0.25	25	3	25
193	3	4	294	0	4.4	0.30	1.55	0.60	0.25	26	4	26
194	3	4	299	0	3.2	0.30	1.25	0.75	0.35	20	2	20
195	3	4	304	0	5.5	0.35	2.20	0.70	0.35	28	6	28
196	3	4	310	0	3.5	0.25	1.40	0.80	0.35	23	3	23
197	3	4	315	0	3.2	0.60	0.85	0.55	0.20	21	4	21
198	3	4	320	0	5.6	0.70	1.90	0.70	0.80	29	5	29
199	3	4	325	0	6.8	0.95	1.95	0.55	0.25	33	6	33
200	3	4	330	0	6.7	0.75	2.00	0.85	0.35	35	4	35
201	3	4	335	0	4.3	0.60	1.65	0.75	0.40	28	5	28
202	3	4	340	0	3.0	0.75	0.75	0.40	0.20	21	6	21
203	3	5	343	0	5.7	0.55	2.45	0.55	0.20	27	3	27
204	3	5	348	0	5.8	0.90	2.00	0.90	0.35	26	3	26
205	3	5	353	0	2.4	0.00	1.15	0.70	0.30	13	3	13
206	3	5	358	0	2.2	0.00	0.95	0.40	0.20	14	2	14
207	3	5	363	0	5.5	0.45	2.20	0.90	0.35	27	2	27
208	3	5	368	0	6.5	0.90	2.05	0.60	0.30	27	5	27
209	3	5	373	0	4.4	0.50	1.40	0.65	0.30	21	2	21
210	3	5	378	0	2.6	0.30	0.80	0.40	0.25	18	3	18
211	3	5	383	0	5.9	0.50	1.85	0.55	0.25	30	6	30
212	3	5	388	0	1.9	0.00	0.85	0.40	0.20	14	1	14
213	3	5	393	0	3.0	0.25	1.20	0.55	0.25	19	3	19
214	3	5	398	0	3.5	0.30	1.15	0.65	0.30	20	3	20
215	3	5	403	0	4.1	0.75	1.05	0.90	0.35	22	5	22
216	3	5	408	0	6.7	0.60	2.40	0.70	0.30	28	5	28
217	3	5	413	0	4.1	0.45	0.65	0.60	0.25	22	4	22
218	3	5	418	0	3.7	0.50	1.40	0.60	0.30	22	3	22
219	3	5	423	0	4.1	0.30	1.25	0.55	0.25	20	3	20
220	3	5	428	0	2.6	0.20	0.85	0.55	0.20	15	4	15

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	B	L	P	T	D	H	S	R	R	S	C	C
	O	B	S	A	B	T	A	A	D	M	N	N
	O	B	S	A	B	T	A	A	D	M	N	N
221	3	5	433	0	5.2	0.300	1.85	0.70	0.35	25	3	25
222	4	1	435	0	4.2	1.000	1.55	0.60	0.25	25	5	25
223	4	1	440	0	3.8	0.750	0.80	0.55	0.25	28	6	28
224	4	1	445	0	4.5	0.350	1.50	0.50	0.25	27	7	27
225	4	1	450	0	4.3	1.350	1.15	0.55	0.20	28	9	28
226	4	1	455	0	3.7	0.250	1.20	0.40	0.20	26	10	26
227	4	1	461	0	4.5	0.600	1.20	0.65	0.30	27	7	27
228	4	1	466	0	5.2	0.700	1.50	0.40	0.20	30	9	30
229	4	1	471	0	5.9	1.200	1.50	0.70	0.20	30	3	30
230	4	1	476	0	4.9	0.550	1.50	0.45	0.20	26	5	26
231	4	1	481	0	5.1	0.900	1.45	0.70	0.25	29	4	29
232	4	1	486	0	5.5	0.550	2.05	0.35	0.20	30	6	30
233	4	1	491	0	5.0	0.750	1.50	0.45	0.20	26	4	26
234	4	1	496	0	4.4	0.550	1.25	0.55	0.20	23	5	23
235	4	1	501	0	5.4	0.500	2.00	1.05	0.50	23	1	23
236	4	1	507	0	2.7	0.000	1.15	0.65	0.30	15	1	15
237	4	1	512	0	3.5	0.300	1.45	1.05	0.50	20	2	20
238	4	1	517	0	4.1	0.000	1.80	0.95	0.45	20	4	20
239	4	1	525	0	3.7	0.600	0.80	0.45	0.20	25	4	25
240	4	1	530	0	3.0	0.350	1.10	0.45	0.20	24	4	24
241	4	1	535	0	4.9	0.600	1.45	0.25	0.10	24	3	24
242	4	2	539	0	3.5	0.500	1.20	0.65	0.30	21	4	21
243	4	2	548	0	3.8	0.450	1.05	0.50	0.25	21	3	21
244	4	2	557	0	5.3	1.150	1.60	0.75	0.40	29	5	29
245	4	2	561	1	1.9	0.000	1.00	0.65	0.25	17	3	8
246	4	2	564	0	5.2	0.650	1.85	0.90	0.30	23	2	23
247	4	2	569	0	6.7	0.800	1.40	0.45	0.20	30	6	30
248	4	2	575	1	2.2	0.400	0.45	0.50	0.30	13	3	7
249	4	2	576	0	3.3	0.400	0.90	0.45	0.20	21	6	21
250	4	2	583	0	2.7	0.350	0.70	0.65	0.35	16	4	16
251	4	2	590	0	4.8	0.550	1.35	0.60	0.25	21	5	21
252	4	2	595	0	3.6	0.300	1.25	0.55	0.25	17	1	17
253	4	2	602	0	4.5	0.550	1.30	0.70	0.30	26	2	26
254	4	2	611	0	2.5	0.000	1.00	0.45	0.20	16	4	16
255	4	2	617	0	3.3	0.300	1.00	0.40	0.20	20	5	20
256	4	2	624	0	3.1	0.400	1.00	0.65	0.25	17	3	17
257	4	2	630	0	2.2	0.000	1.00	0.65	0.30	14	1	14
258	4	2	635	1	3.2	0.300	1.10	0.40	0.20	20	3	12
259	4	2	637	0	4.3	0.300	1.70	0.50	0.25	22	2	22
260	4	2	645	0	2.5	0.300	0.75	0.30	0.10	17	5	17
261	4	2	650	0	3.1	0.300	0.95	0.40	0.20	18	5	18
262	4	3	652	0	5.4	0.950	0.75	0.60	0.30	24	2	24
263	4	3	657	0	3.5	0.450	1.30	0.80	0.40	20	4	20
264	4	3	662	0	2.5	0.300	0.95	0.65	0.30	17	3	17

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				S				R	R	S	C	C
	B			T	D	H	S	A	A	T	R	R
	L	P		A	B	R	A	D	D	M	N	N
O	O	L	T	T	H	T	P	0	5	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	3	3	3	3	3	3	3	3	3
265	4	3	667	0	2.9	0.300	1.05	0.90	0.40	17	2	17
266	4	3	672	0	0.0	0.155	0.35	1.05	0.65	6	2	17
267	4	3	677	0	2.3	0.250	0.70	0.25	0.10	17	5	17
268	4	3	683	0	4.6	0.400	1.55	0.75	0.30	20	3	20
269	4	3	688	0	3.4	0.500	1.00	0.55	0.25	19	6	19
270	4	3	694	0	4.0	0.500	1.35	0.90	0.40	21	1	21
271	4	3	699	0	4.4	0.750	1.50	0.90	0.45	19	3	19
272	4	3	704	0	3.5	0.450	0.90	0.50	0.25	16	4	16
273	4	3	709	0	2.7	0.000	1.30	0.70	0.30	15	3	15
274	4	3	714	0	2.9	0.200	1.10	0.80	0.35	18	4	18
275	4	3	719	0	3.5	0.000	1.45	0.65	0.30	19	2	19
276	4	3	724	0	4.1	0.500	1.25	0.75	0.30	19	4	19
277	4	3	729	0	2.0	0.150	0.80	0.45	0.20	14	5	14
278	4	3	734	0	4.2	0.200	1.40	0.70	0.30	22	3	22
279	4	3	739	0	2.7	0.000	1.20	0.65	0.20	16	2	16
280	4	3	744	0	3.2	0.450	0.85	0.75	0.35	17	4	17
281	4	3	749	0	3.1	0.700	1.20	0.90	0.45	18	4	18
282	4	3	754	0	4.1	0.600	1.60	0.90	0.35	21	3	21
283	4	3	759	0	5.8	0.600	1.90	1.10	0.50	25	1	25
284	4	3	764	0	3.7	0.350	1.45	1.05	0.45	17	1	17
285	4	3	769	0	3.7	0.250	1.50	0.95	0.40	19	1	19
286	4	4	773	0	4.8	0.200	2.00	0.85	0.40	23	1	23
287	4	4	781	0	4.8	0.700	1.45	1.05	0.55	19	4	19
288	4	4	787	0	4.3	0.450	1.60	1.05	0.45	20	3	20
289	4	4	794	0	3.0	0.350	1.20	0.75	0.35	19	4	19
290	4	4	801	0	4.9	0.950	0.95	0.85	0.35	21	1	21
291	4	4	807	0	5.6	0.700	1.55	0.85	0.40	22	3	22
292	4	4	812	0	3.6	0.400	1.00	0.55	0.25	18	5	18
293	4	4	819	0	5.6	0.950	1.55	0.85	0.40	20	2	20
294	4	4	826	0	3.6	0.450	1.30	0.90	0.40	19	2	19
295	4	4	837	0	3.1	0.000	1.60	0.90	0.40	15	2	15
296	4	4	844	0	3.5	0.400	1.20	0.90	0.45	16	3	16
297	4	4	851	0	4.0	0.500	1.10	0.75	0.35	22	4	22
298	4	4	858	0	2.7	0.500	0.65	0.70	0.40	16	3	16
299	4	4	863	0	4.7	0.650	1.45	0.75	0.35	22	6	22
300	4	4	869	0	3.3	0.300	0.95	0.55	0.25	15	4	15
301	4	4	875	0	3.5	0.300	1.55	1.00	0.45	17	4	17
302	4	4	881	0	3.9	0.300	1.35	0.90	0.45	16	2	16
303	4	5	885	0	3.6	0.300	1.35	0.85	0.40	20	2	20
304	4	5	890	0	5.0	0.650	1.45	0.90	0.45	18	1	18
305	4	5	895	0	3.2	0.250	0.95	0.65	0.25	17	3	17
306	4	5	900	0	2.7	0.450	0.85	0.75	0.40	16	5	16
307	4	5	905	0	4.1	0.400	1.30	0.75	0.35	20	3	20
308	4	5	910	0	3.4	0.300	1.10	0.90	0.50	16	1	16

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				S				R	R	S	C	C
	B			T	D	H	S	A	A	T	R	R
	L	P		A	B	R	A	D	D	M	N	N
O	O	L	T	T	H	T	P	0	5	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	3	3	3	3	3	3	3	3	3
309	4	5	915	0	3.2	0.25	1.15	0.85	0.40	17	2	17
310	4	5	920	0	3.0	0.15	1.35	1.00	0.45	13	3	13
311	4	5	925	0	2.7	0.20	0.80	0.50	0.20	13	1	13
312	4	5	930	0	3.0	0.25	0.90	0.60	0.25	17	2	17
313	4	5	935	0	4.7	0.50	0.85	0.85	0.40	20	1	20
314	4	5	940	0	2.5	0.25	0.90	0.90	0.40	14	1	14
315	4	5	945	0	3.5	0.00	1.35	0.65	0.30	16	1	16
316	4	5	950	0	2.7	0.25	0.90	0.75	0.40	16	1	16
317	4	5	955	0	3.6	0.50	1.25	0.70	0.30	19	2	19
318	4	5	960	0	2.6	0.30	0.90	0.70	0.30	11	1	11
319	4	5	965	0	2.3	0.00	1.05	0.85	0.35	12	3	12
320	4	5	970	0	2.9	0.25	0.90	0.65	0.30	13	5	13
321	4	5	975	0	2.2	0.00	1.00	0.75	0.35	11	1	11
322	4	5	980	0	1.8	0.35	0.40	0.75	0.30	10	2	10
323	4	5	985	0	3.6	0.25	1.15	0.75	0.30	17	3	17
324	4	5	990	0	2.0	0.25	0.55	0.60	0.25	12	3	12
325	4	5	995	0	1.9	0.00	0.85	0.75	0.35	10	3	10

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				S				R	R	S	C	C
	B	P		T	D	H	S	A	A	T	R	R
	L	O		A	B	R	A	D	D	M	N	N
O	O	L		T	H	T	P	1	0	L	H	T
B	C	O	A	9	9	9	9	9	5	N	T	P
S	K	T	G	4	4	4	4	4	4	4	4	4
1	1	1	3	0	6.1	1.75	1.20	0.350	0.10	39	19	39
2	1	1	11	0	8.8	1.85	2.40	0.600	0.30	41	15	41
3	1	1	21	0	6.8	2.55	1.10	0.400	0.20	38	18	38
4	1	1	26	0	7.5	2.25	1.55	0.250	0.15	43	21	43
5	1	1	33	0	7.5	1.75	2.00	0.400	0.25	39	20	39
6	1	1	41	0	6.5	2.05	1.40	0.200	0.15	39	23	39
7	1	1	46	0	7.5	1.90	1.25	0.400	0.15	39	20	39
8	1	1	54	0	5.8	1.50	1.30	0.200	0.15	39	21	39
9	1	1	60	0	7.8	2.15	1.90	0.400	0.20	43	22	43
10	1	1	66	0	7.1	2.00	1.80	0.300	0.15	47	22	47
11	1	2	76	0	7.8	1.65	2.20	0.350	0.20	43	23	43
12	1	2	83	0	7.7	1.80	1.30	0.250	0.15	43	17	43
13	1	2	92	0	8.0	1.50	1.65	0.400	0.20	40	14	40
14	1	2	98	2	5.8	2.00	0.80	0.200	0.10	32	19	32
15	1	2	101	0	7.5	1.20	1.35	0.300	0.20	41	23	41
16	1	2	104	2	5.9	1.45	1.30	0.175	0.10	34	18	34
17	1	2	112	0	8.1	2.15	1.80	0.400	0.25	46	26	46
18	1	2	120	0	8.1	1.60	1.95	0.300	0.20	42	10	42
19	1	2	131	0	6.7	1.25	1.35	0.250	0.10	42	23	42
20	1	2	140	0	6.2	1.30	0.95	0.200	0.10	39	14	39
21	1	2	148	0	8.1	1.75	1.25	0.300	0.20	45	21	45
22	1	2	157	0	7.3	1.75	1.35	0.400	0.20	40	16	40
23	1	3	167	0	7.5	2.00	1.45	0.300	0.15	41	21	41
24	1	3	172	0	6.7	1.55	1.20	0.200	0.10	34	19	34
25	1	3	177	0	5.5	1.55	1.45	0.250	0.10	30	19	30
26	1	3	184	0	6.1	1.55	1.50	0.350	0.20	35	21	35
27	1	3	189	0	7.1	1.25	1.40	0.250	0.15	43	20	43
28	1	3	196	0	7.6	1.85	1.25	0.250	0.15	41	19	41
29	1	3	202	0	7.6	1.55	1.65	0.200	0.10	42	20	42
30	1	3	210	1	6.3	2.15	0.65	0.200	0.10	42	20	38
31	1	3	211	0	7.3	1.55	1.35	0.300	0.15	39	19	39
32	1	3	217	0	6.4	1.55	1.15	0.250	0.10	37	22	37
33	1	3	222	0	6.1	1.40	1.50	0.300	0.15	35	22	35
34	1	3	227	0	7.1	1.15	1.85	0.150	0.05	44	24	44
35	1	3	232	0	6.5	1.10	1.55	0.300	0.15	44	23	44
36	1	4	238	0	8.0	1.35	1.55	0.300	0.15	43	25	43
37	1	4	244	0	7.0	1.45	1.60	0.200	0.10	39	22	39
38	1	4	249	0	6.9	1.50	1.45	0.250	0.10	41	20	41
39	1	4	255	0	6.3	1.80	1.15	0.150	0.05	44	20	44
40	1	4	260	0	5.4	0.95	1.55	0.250	0.10	40	21	40
41	1	4	261	0	7.9	1.15	2.05	0.250	0.10	44	17	44
42	1	4	267	0	7.6	1.55	1.55	0.300	0.15	46	26	46
43	1	4	274	0	6.6	1.55	1.40	0.250	0.10	40	19	40
44	1	4	279	2	8.9	2.30	1.85	0.300	0.15	39	21	39

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				S				R	R	S	C	C
	B	P		T	D	H	S	A	A	T	R	R
	L	O		A	B	R	A	D	D	M	N	N
O	C	L	T	T	H	T	P	1	0	N	T	P
B	O	O	A	T	9	9	9	9	5	9	9	9
S	K	T	G	4	4	4	4	4	4	4	4	4
45	1	4	280	0	6.3	0.70	1.75	0.200	0.100	40	20	40
46	1	4	286	0	7.1	1.30	1.45	0.250	0.100	40	22	40
47	1	4	291	0	7.3	1.25	2.00	0.250	0.150	44	20	44
48	1	4	296	0	4.2	0.00	1.85	0.200	0.100	33	22	33
49	1	4	302	2	6.5	1.35	1.50	0.250	0.100	38	22	39
50	1	4	303	0	6.5	0.55	1.85	0.300	0.150	40	21	40
51	1	4	309	0	5.6	1.50	0.95	0.250	0.100	37	22	37
52	1	4	315	0	8.5	2.05	1.75	0.300	0.150	47	21	47
53	1	4	320	0	5.4	2.25	0.70	0.200	0.100	34	20	34
54	1	4	325	0	7.0	1.85	1.35	0.200	0.100	32	13	32
55	2	1	334	0	4.7	1.25	0.85	0.150	0.100	35	25	35
56	2	1	347	0	5.0	1.05	0.85	0.100	0.050	31	22	31
57	2	1	359	0	4.9	1.30	1.25	0.200	0.100	31	15	31
58	2	1	367	0	5.0	1.15	1.05	0.250	0.150	33	18	33
59	2	1	374	0	5.1	1.35	1.00	0.200	0.150	33	22	33
60	2	1	383	0	6.4	1.95	1.15	0.200	0.100	35	24	35
61	2	1	392	0	4.7	0.90	1.25	0.250	0.100	29	11	27
62	2	1	403	0	6.7	1.80	1.25	0.250	0.150	36	18	36
63	2	1	414	0	6.8	1.65	1.20	0.200	0.100	31	11	31
64	2	1	425	0	7.5	2.05	1.40	0.200	0.100	37	11	37
65	2	1	434	0	7.1	2.05	1.25	0.150	0.050	40	14	39
66	2	1	442	0	4.6	1.00	0.55	0.250	0.100	36	11	36
67	2	1	453	0	4.5	0.65	0.45	0.200	0.050	31	12	31
68	2	1	458	0	4.6	0.85	0.65	0.200	0.100	35	20	35
69	2	1	467	0	3.9	1.00	0.60	0.200	0.100	26	8	24
70	2	2	477	0	4.5	1.50	0.65	0.100	0.050	30	20	30
71	2	2	483	0	6.7	1.45	1.10	0.250	0.150	39	24	39
72	2	2	490	0	6.8	1.55	1.35	0.250	0.100	38	19	38
73	2	2	495	0	6.0	1.45	1.00	0.200	0.100	41	20	40
74	2	2	501	0	5.4	1.35	0.85	0.200	0.100	37	23	37
75	2	2	510	0	5.4	1.55	0.70	0.200	0.100	38	21	38
76	2	2	518	0	7.5	2.15	1.30	0.250	0.150	33	11	32
77	2	2	524	0	6.4	2.10	1.05	0.200	0.100	37	20	37
78	2	2	532	0	7.1	1.95	1.10	0.300	0.150	44	25	44
79	2	2	535	2	4.4	1.10	1.10	0.175	0.075	31	13	31
80	2	2	543	0	5.4	1.40	0.80	0.200	0.100	36	19	36
81	2	2	544	2	6.8	1.65	1.50	0.250	0.125	40	18	40
82	2	2	552	0	5.8	1.00	1.30	0.250	0.100	40	24	40
83	2	2	561	0	5.4	1.40	0.70	0.350	0.100	31	17	31
84	2	2	566	2	6.1	1.25	1.65	0.250	0.100	39	18	39
85	2	2	569	0	7.2	2.05	1.10	0.150	0.050	36	18	36
86	2	2	575	0	5.5	1.60	0.85	0.250	0.100	33	22	33
87	2	2	583	0	5.5	1.20	0.85	0.150	0.050	45	22	45
88	2	2	589	0	5.8	1.45	0.95	0.200	0.100	36	12	21

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				S				R	R	S	C	C
				T	D	H	S	D	A	T	R	R
	B	P		A	B	R	A	1	0	L	H	T
O	L			T	H	T	P	0	5	N	T	P
B	C	O		A	9	9	9	9	9	9	9	9
S	K	T		G	4	4	4	4	4	4	4	4
89	2	2	599	0	6.1	2.05	0.55	0.20	0.10	36	21	36
90	2	2	607	0	4.6	1.30	0.75	0.15	0.05	34	15	34
91	2	2	613	2	5.6	1.50	1.35	0.20	0.10	.	.	.
92	2	2	618	0	3.8	1.00	0.75	0.10	0.05	33	22	31
93	2	3	626	0	7.4	1.55	1.40	0.20	0.10	35	18	35
94	2	3	635	0	7.2	1.90	1.15	0.20	0.10	37	23	37
95	2	3	640	0	6.9	1.60	1.15	0.25	0.10	42	20	42
96	2	3	649	0	5.4	1.55	0.75	0.15	0.10	32	16	32
97	2	3	654	0	5.9	1.90	0.60	0.10	0.05	32	21	32
98	2	3	659	0	6.9	1.55	1.15	0.15	0.05	38	20	38
99	2	3	664	0	6.6	1.85	0.95	0.15	0.05	39	18	39
100	2	3	670	0	6.8	1.30	1.25	0.25	0.10	41	13	41
101	2	3	676	0	7.0	1.40	1.40	0.20	0.10	38	20	38
102	2	3	697	0	5.7	1.85	0.60	0.10	0.05	33	21	33
103	2	3	705	0	6.8	1.35	1.40	0.25	0.10	41	23	41
104	2	3	715	0	6.4	1.20	1.65	0.25	0.15	39	20	39
105	2	3	721	0	7.9	1.75	1.40	0.20	0.10	42	21	42
106	2	3	730	0	8.8	2.35	1.55	0.25	0.10	42	17	42
107	2	3	739	0	7.4	1.25	0.75	0.25	0.15	40	17	40
108	2	4	744	0	6.3	1.25	1.60	0.30	0.10	40	17	40
109	2	4	751	0	6.0	1.95	1.15	0.20	0.10	38	16	38
110	2	4	758	0	4.9	1.25	0.85	0.10	0.05	36	23	36
111	2	4	767	0	6.1	1.10	1.00	0.20	0.10	40	17	40
112	2	4	772	0	5.7	1.45	0.85	0.10	0.05	37	22	37
113	2	4	778	0	4.4	0.95	0.70	0.15	0.05	34	15	34
114	2	4	787	0	4.7	1.10	0.90	0.20	0.10	33	13	33
115	2	4	793	0	6.6	1.80	0.65	0.20	0.10	36	17	36
116	2	4	798	0	4.6	0.85	0.75	0.10	0.05	31	21	31
117	2	4	808	0	5.2	0.90	0.90	0.15	0.05	37	26	37
118	2	4	818	0	5.7	1.55	0.70	0.20	0.10	44	26	44
119	2	4	825	0	4.5	1.05	1.20	0.20	0.10	34	22	34
120	2	4	830	0	6.4	1.15	1.40	0.20	0.10	37	26	37
121	2	4	835	0	6.4	1.75	0.90	0.15	0.10	33	14	33
122	2	4	841	0	4.9	1.05	0.70	0.10	0.05	30	19	30
123	3	1	4	0	6.9	0.70	2.10	0.30	0.15	34	8	34
124	3	1	10	0	6.6	0.90	1.95	0.55	0.25	31	7	31
125	3	1	15	0	4.9	0.80	1.45	0.40	0.20	26	8	26
126	3	1	21	0	3.0	0.30	1.15	0.40	0.20	25	8	25
127	3	1	26	0	4.6	0.65	1.05	0.50	0.20	26	7	26
128	3	1	32	0	4.7	0.75	1.25	0.50	0.20	27	6	27
129	3	1	38	0	4.1	0.55	1.65	0.50	0.20	23	5	23
130	3	1	43	0	8.3	0.80	2.25	0.50	0.25	40	10	40
131	3	1	49	0	2.7	0.40	0.90	0.45	0.20	20	7	20
132	3	1	54	0	3.7	0.55	1.20	0.60	0.25	24	7	24

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				S				R	R	S	C	C
				T	D	H	S	D	A	T	R	R
	B	P		A	B	R	A	1	0	L	H	T
O	L			T	H	T	P	0	5	N	T	P
B	C	O		A	9	9	9	9	9	9	9	9
S	K	T		G	4	4	4	4	4	4	4	4
133	3	1	60	0	7.5	1.40	1.45	0.20	0.100	32	10	32.0
134	3	1	66	0	4.4	0.45	1.45	0.60	0.200	21	3	21.0
135	3	2	72	0	5.3	0.85	1.65	0.35	0.150	20	5	20.0
136	3	2	77	0	3.1	0.25	0.15	0.45	0.150	16	4	10.0
137	3	2	82	0	3.1	0.30	1.10	0.50	0.250	21	5	21.0
138	3	2	87	0	7.3	1.85	1.40	0.35	0.150	26	14	26.0
139	3	2	92	0	3.0	0.30	1.10	0.80	0.300	16	4	16.0
140	3	2	98	0	7.6	1.60	1.70	0.50	0.250	28	4	28.0
141	3	2	104	0	3.7	0.35	1.20	0.50	0.200	21	6	20.0
142	3	2	109	0	7.0	0.90	2.05	0.45	0.150	37	8	37.0
143	3	2	114	0	3.6	0.55	1.05	0.85	0.400	20	5	20.0
144	3	2	119	0	2.4	0.00	0.95	0.60	0.300	14	3	14.0
145	3	2	124	0	7.1	1.30	2.00	0.75	0.350	35	10	35.0
146	3	2	129	0	5.2	0.95	1.05	0.30	0.150	28	9	28.0
147	3	2	134	0	8.0	1.20	2.15	0.50	0.250	30	6	30.0
148	3	2	139	0	6.5	0.60	1.80	0.25	0.100	32	8	32.0
149	3	2	144	0	6.9	0.95	1.45	0.35	0.150	34	10	34.0
150	3	2	149	0	2.4	0.35	0.70	0.30	0.125	17	7	17.0
151	3	2	154	0	7.9	1.50	1.90	0.90	0.300	37	12	37.0
152	3	2	159	0	5.1	0.70	1.25	0.25	0.100	28	12	28.0
153	3	2	164	0	4.9	1.05	0.85	0.25	0.100	34	14	34.0
154	3	2	169	0	6.3	1.40	1.45	0.25	0.100	33	10	33.0
155	3	2	174	0	6.5	0.80	2.05	0.40	0.150	35	12	35.0
156	3	3	181	0	3.3	0.55	1.15	0.60	0.250	20	6	20.0
157	3	3	187	0	4.1	0.65	1.15	0.55	0.300	24	5	24.0
158	3	3	194	0	8.3	1.55	2.05	0.95	0.450	39	13	39.0
159	3	3	202	0	3.4	0.45	0.90	0.25	0.100	19	5	19.0
160	3	3	207	0	4.7	0.70	1.10	0.40	0.150	32	8	32.0
161	3	3	213	0	5.4	0.65	1.75	0.80	0.350	29	6	29.0
162	3	3	219	0	5.8	0.90	1.45	0.40	0.150	32	7	32.0
163	3	3	224	0	7.9	1.00	2.65	0.65	0.350	34	6	34.0
164	3	3	233	0	3.5	0.45	0.70	0.60	0.200	22	5	22.0
165	3	3	238	0	5.7	1.10	1.65	0.60	0.250	27	5	27.0
166	3	3	243	0	3.0	0.25	1.20	0.60	0.300	20	6	20.0
167	3	3	248	0	5.0	1.05	0.95	0.30	0.150	32	6	32.0
168	3	3	255	0	3.3	0.50	0.85	0.45	0.200	21	6	21.0
169	3	3	262	0	3.1	0.35	0.90	0.45	0.200	20	5	20.0
170	3	4	269	0	5.6	1.35	1.05	0.30	0.150	33	10	33.0
171	3	4	274	0	8.3	1.65	2.40	0.65	0.350	41	13	41.0
172	3	4	280	0	5.7	1.05	1.85	0.70	0.300	24	4	24.0
173	3	4	285	0	7.7	1.60	1.85	0.45	0.200	34	6	34.0
174	3	4	290	0	3.7	0.40	1.30	0.85	0.350	22	5	22.0
175	3	4	295	0	3.5	0.30	1.65	0.75	0.350	22	6	22.0
176	3	4	300	0	3.9	0.40	1.10	0.45	0.150	21	5	21.0

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	B	L	P	S	T	D	H	S	R	R	S	C	C
	O	O	O	A	A	B	R	A	D	A	M	N	N
	B	C	O	T	T	H	T	P	0	5	N	T	P
	S	K	T	G	4	4	4	4	4	4	4	4	4
177	3	4	306	0	5.8	1.05	1.60	0.45	0.200	32	8	32.0	
178	3	4	311	0	8.7	0.75	2.75	0.70	0.300	33	6	33.0	
179	3	4	316	0	5.2	0.45	1.70	0.65	0.300	28	6	27.5	
180	3	4	321	0	5.8	0.50	1.80	0.45	0.150	30	6	30.0	
181	3	4	326	0	5.7	1.35	1.05	0.60	0.300	38	15	38.0	
182	3	4	331	0	2.5	0.20	0.90	0.45	0.150	19	7	19.0	
183	3	4	336	0	5.6	0.75	1.45	0.50	0.200	28	7	28.0	
184	3	4	341	0	6.6	0.90	1.85	0.40	0.200	34	12	34.0	
185	3	5	344	0	5.4	0.25	1.95	0.50	0.200	26	4	26.0	
186	3	5	349	0	3.5	0.30	1.30	0.70	0.300	17	3	17.0	
187	3	5	354	0	2.0	0.00	0.90	0.60	0.300	11	3	11.0	
188	3	5	359	0	1.5	0.00	0.70	0.60	0.300	10	2	10.0	
189	3	5	364	0	6.0	0.55	1.85	0.45	0.200	32	6	32.0	
190	3	5	369	0	2.0	0.00	0.95	0.35	0.175	17	5	17.0	
191	3	5	374	0	5.4	0.80	1.40	0.50	0.200	26	8	26.0	
192	3	5	379	0	4.5	0.55	1.30	0.60	0.300	22	5	22.0	
193	3	5	384	0	5.7	0.90	1.70	0.60	0.300	26	8	26.0	
194	3	5	389	0	6.9	1.20	2.20	0.85	0.900	31	7	31.0	
195	3	5	394	0	3.6	0.55	1.30	0.75	0.350	22	6	22.0	
196	3	5	399	0	4.5	0.55	1.35	0.50	0.200	26	8	26.0	
197	3	5	404	0	5.5	0.75	1.40	0.60	0.250	24	6	24.0	
198	3	5	409	0	1.8	0.00	0.85	0.50	0.200	11	3	11.0	
199	3	5	414	0	4.3	0.95	1.00	0.45	0.200	25	6	25.0	
200	3	5	419	0	4.0	0.35	1.45	0.50	0.250	24	9	24.0	
201	3	5	424	0	3.5	0.30	1.10	0.70	0.300	23	4	23.0	
202	3	5	429	0	2.8	0.00	1.40	0.60	0.275	21	8	21.0	
203	4	1	436	0	4.5	0.70	1.25	0.25	0.100	25	6	25.0	
204	4	1	441	0	4.4	0.65	1.20	0.40	0.200	29	7	29.0	
205	4	1	446	0	5.5	1.00	1.20	0.50	0.250	31	8	31.0	
206	4	1	451	0	6.1	0.95	1.40	0.40	0.150	28	7	28.0	
207	4	1	456	0	5.4	1.30	0.85	0.45	0.150	28	7	28.0	
208	4	1	462	0	3.4	0.50	1.25	0.40	0.200	24	8	24.0	
209	4	1	467	0	5.4	0.90	1.25	0.55	0.250	26	7	26.0	
210	4	1	472	0	3.5	0.50	1.15	0.40	0.175	26	9	26.0	
211	4	1	477	0	3.8	0.35	0.85	0.60	0.250	24	3	16.0	
212	4	1	482	0	3.3	0.75	0.70	0.20	0.100	26	11	26.0	
213	4	1	487	0	6.4	0.75	1.80	0.60	0.250	31	9	31.0	
214	4	1	492	0	5.7	1.00	1.50	0.35	0.100	29	12	29.0	
215	4	1	497	0	3.4	0.55	0.85	0.35	0.100	23	7	23.0	
216	4	1	502	0	2.2	0.10	0.80	0.35	0.150	16	5	16.0	
217	4	1	508	0	2.3	0.00	1.20	0.65	0.250	14	3	14.0	
218	4	1	513	0	5.2	0.80	1.75	0.80	0.350	27	6	27.0	
219	4	1	518	0	2.9	0.40	0.80	0.50	0.200	20	5	20.0	
220	4	1	526	0	4.2	0.70	0.90	0.30	0.125	21	5	21.0	

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	B	L	P	S	T	D	H	S	R	R	S	C	C
	O	O	O	A	A	B	R	A	D	A	M	N	N
	B	C	O	T	T	H	T	P	0	5	N	T	P
	S	K	T	G	4	4	4	4	4	4	4	4	4
221	4	1	531	0	3.6	0.35	1.20	0.55	0.25	24	7	24	
222	4	1	536	0	5.1	0.80	1.25	0.40	0.15	25	9	25	
223	4	2	540	0	5.5	0.55	1.75	0.45	0.15	24	3	24	
224	4	2	549	0	2.3	0.40	0.70	0.50	0.15	19	6	11	
225	4	2	558	0	5.2	1.05	1.50	0.35	0.15	28	7	28	
226	4	2	561	1	.	.	.	.	.	.	.	.	.
227	4	2	565	0	4.4	0.00	2.10	0.90	0.45	22	4	22	
228	4	2	571	0	4.1	0.45	1.25	0.50	0.20	24	6	24	
229	4	2	575	1	.	.	.	.	.	.	.	.	.
230	4	2	577	0	2.4	0.45	0.75	0.55	0.25	18	5	18	
231	4	2	584	0	2.9	0.35	0.85	0.45	0.15	18	5	18	
232	4	2	591	0	4.8	1.15	1.10	0.50	0.20	25	8	25	
233	4	2	597	0	4.0	0.50	1.35	0.50	0.15	19	6	12	
234	4	2	606	0	6.3	1.95	0.95	0.60	0.25	23	6	23	
235	4	2	612	0	3.5	0.25	1.20	0.40	0.25	22	7	22	
236	4	2	618	0	3.0	0.40	0.90	0.45	0.20	20	4	20	
237	4	2	626	0	3.0	0.40	0.80	0.40	0.20	19	6	19	
238	4	2	631	0	1.9	0.30	0.50	0.30	0.10	13	4	10	
239	4	2	635	1	.	.	.	.	.	.	.	.	.
240	4	2	638	0	3.6	0.25	1.15	0.45	0.25	20	5	20	
241	4	2	646	0	3.5	0.35	1.05	0.45	0.20	19	7	19	
242	4	3	651	0	5.8	0.90	1.55	0.80	0.40	28	8	28	
243	4	3	653	0	4.3	0.45	1.65	0.85	0.40	22	5	22	
244	4	3	658	0	3.5	0.40	1.00	0.65	0.30	19	3	19	
245	4	3	663	0	5.1	0.65	1.25	0.55	0.25	26	4	26	
246	4	3	668	0	2.1	0.00	0.90	0.50	0.25	14	4	14	
247	4	3	673	0	3.0	0.15	1.20	0.60	0.30	21	7	21	
248	4	3	678	0	4.0	0.55	1.50	0.70	0.35	22	6	22	
249	4	3	684	0	4.1	0.55	1.15	0.70	0.40	23	6	23	
250	4	3	689	0	4.4	0.40	1.80	0.80	0.40	22	5	22	
251	4	3	695	0	4.4	1.55	1.35	0.85	0.30	20	5	13	
252	4	3	700	0	3.3	0.15	1.15	0.45	0.15	17	6	17	
253	4	3	705	0	4.4	0.65	1.15	0.60	0.25	24	10	24	
254	4	3	710	0	3.0	0.20	1.15	0.60	0.20	16	5	16	
255	4	3	715	0	3.7	0.45	1.10	0.50	0.15	20	6	20	
256	4	3	720	0	3.2	0.45	0.95	0.70	0.30	17	6	17	
257	4	3	725	0	4.6	0.45	1.50	0.65	0.25	22	4	22	
258	4	3	730	0	5.4	0.70	1.30	0.50	0.25	25	6	25	
259	4	3	735	0	2.9	0.55	0.85	0.75	0.35	19	4	19	
260	4	3	740	0	4.6	0.70	1.05	0.60	0.30	22	7	22	
261	4	3	745	0	5.0	0.50	1.50	0.75	0.30	23	5	23	
262	4	3	750	0	6.3	0.80	2.45	1.20	0.45	23	4	23	
263	4	3	755	0	3.6	0.40	1.40	0.85	0.40	20	6	20	
264	4	3	760	0	2.5	0.00	1.10	0.75	0.30	15	4	15	

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	B	P	S	R	R	S	C	C
	L	O	T	A	D	T	R	R
	O	C	A	1	0	N	H	T
	S	K	G	4	4	4	4	4
265	4	3	765	0	3.4	0.35	1.00	0.75
266	4	3	770	0	3.7	0.55	0.80	0.80
267	4	4	775	0	3.3	0.00	1.35	0.65
268	4	4	783	0	3.3	0.30	1.00	0.50
269	4	4	788	0	5.0	0.85	1.55	1.00
270	4	4	795	0	4.4	0.40	1.50	0.55
271	4	4	802	0	3.5	0.35	1.15	0.60
272	4	4	808	0	4.6	0.70	1.60	0.80
273	4	4	813	0	4.6	0.60	1.80	1.00
274	4	4	822	0	3.9	0.40	1.15	0.50
275	4	4	828	0	4.8	0.35	1.75	0.80
276	4	4	838	0	5.0	0.70	1.70	0.70
277	4	4	845	0	4.7	0.40	1.40	0.70
278	4	4	853	0	5.0	0.50	1.75	0.85
279	4	4	859	0	3.5	0.35	1.05	0.55
280	4	4	864	0	4.0	0.65	1.15	0.60
281	4	4	870	0	4.8	0.70	1.40	0.55
282	4	4	876	0	3.9	0.45	1.05	0.60
283	4	4	882	0	3.4	0.30	1.45	0.90
284	4	5	886	0	3.8	0.35	1.30	0.60
285	4	5	891	0	4.4	0.45	1.20	0.55
286	4	5	896	0	2.8	0.00	1.10	0.70
287	4	5	901	0	4.9	0.45	1.70	0.90
288	4	5	906	0	5.3	0.45	1.70	0.65
289	4	5	911	0	6.8	0.60	2.25	1.00
290	4	5	916	0	5.5	0.60	1.75	0.90
291	4	5	921	0	2.5	0.20	0.90	0.45
292	4	5	926	0	3.5	0.25	1.20	0.65
293	4	5	931	0	4.0	0.30	1.20	0.65
294	4	5	936	0	4.7	0.45	1.50	0.75
295	4	5	941	0	4.7	1.15	0.95	0.85
296	4	5	946	0	4.2	0.20	1.60	0.80
297	4	5	951	0	8.1	0.85	2.05	0.80
298	4	5	956	0	2.1	0.00	0.85	0.55
299	4	5	961	0	3.0	0.25	1.00	0.60
300	4	5	966	0	3.1	0.40	0.95	0.70
301	4	5	971	0	2.9	0.00	1.15	0.70
302	4	5	976	0	1.8	0.00	0.85	0.55
303	4	5	981	0	2.2	0.00	0.75	0.40
304	4	5	986	0	3.7	0.25	1.65	0.70
305	4	5	991	0	3.1	0.00	0.40	0.70

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	B	P	S	R	R	S	C	C
	L	O	T	A	D	T	R	R
	O	C	A	1	0	N	H	T
	S	K	G	5	5	5	5	5
1	1	1	4	0	6.7	2.30	0.85	0.20
2	1	1	14	0	7.0	1.50	1.25	0.15
3	1	1	22	0	9.6	1.35	2.95	0.05
4	1	1	27	0	8.9	2.20	1.85	0.15
5	1	1	34	0	6.9	1.75	1.60	0.15
6	1	1	42	0	7.2	2.25	1.60	0.15
7	1	1	47	0	7.7	1.75	2.00	0.15
8	1	1	55	0	6.3	2.20	1.85	0.10
9	1	1	61	0	7.7	2.65	1.30	0.20
10	1	1	67	0	9.7	2.90	1.80	0.25
11	1	2	77	0	8.3	1.55	2.15	0.15
12	1	2	84	0	7.2	2.50	1.60	0.20
13	1	2	95	0	7.7	2.45	1.10	0.15
14	1	2	102	0	7.6	1.20	2.05	0.20
15	1	2	115	0	7.1	1.10	2.05	0.05
16	1	2	121	0	6.7	0.65	2.90	0.05
17	1	2	133	0	8.7	1.25	2.35	0.10
18	1	2	141	0	7.0	1.05	1.85	0.10
19	1	2	150	0	7.3	1.65	1.90	0.15
20	1	2	158	0	7.1	1.55	1.25	0.15
21	1	3	168	0	4.9	1.00	1.15	0.25
22	1	3	173	0	5.9	1.50	1.55	0.15
23	1	3	178	0	5.4	1.25	0.90	0.10
24	1	3	185	0	6.5	1.10	1.40	0.10
25	1	3	186	2	6.5	1.85	1.25	0.10
26	1	3	192	0	6.2	1.25	1.30	0.10
27	1	3	197	0	9.3	1.25	2.45	0.10
28	1	3	203	0	6.2	1.55	1.15	0.15
29	1	3	210	1	6.2	1.55	1.40	0.10
30	1	3	212	0	6.9	2.15	0.95	0.20
31	1	3	218	0	7.3	1.10	1.90	0.15
32	1	3	224	0	5.7	1.85	0.75	0.15
33	1	3	228	0	4.7	2.00	0.40	0.10
34	1	3	233	0	5.5	1.45	0.85	0.10
35	1	4	237	2	6.4	1.40	1.60	0.10
36	1	4	239	0	6.4	0.65	1.00	0.40
37	1	4	245	0	6.8	1.50	1.85	0.15
38	1	4	250	0	6.0	0.40	2.25	0.15
39	1	4	256	0	6.6	0.75	1.25	0.05
40	1	4	262	0	6.0	1.00	0.90	0.05
41	1	4	268	0	3.0	0.75	1.75	0.10
42	1	4	275	0	7.4	1.75	1.50	0.10
43	1	4	281	0	9.4	1.85	2.00	0.15
44	1	4	287	0	6.4	1.30	1.50	0.20

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				S				R	R	S	C	C
				T	D	H	S	D	A	T	R	R
	B	L	P	A	B	R	A	0	1	L	H	T
O	O	L	T	T	H	T	P	5	0	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	5	5	5	5	5	5	5	5	5
45	1	4	292	0	8.1	1.90	1.25	0.15	0.25	41.0	41.0	24.0
46	1	4	297	0	9.0	2.65	1.00	0.25	0.40	40.9	41.0	21.0
47	1	4	304	0	6.0	1.25	1.50	0.20	0.35	39.0	39.0	26.0
48	1	4	310	0	7.6	2.10	1.55	0.40	0.60	39.0	39.0	23.0
49	1	4	316	0	8.8	1.25	2.25	0.25	0.40	42.0	42.0	33.0
50	1	4	321	0	7.7	1.50	2.10	0.20	0.35	38.0	38.0	26.0
51	1	4	326	0	9.1	1.75	2.10	0.20	0.40	45.0	43.0	23.0
52	2	1	335	0	6.1	1.15	1.35	0.25	0.45	32.3	32.3	18.1
53	2	1	349	0	7.4	1.05	1.75	0.25	0.40	38.3	38.3	27.0
54	2	1	361	0	5.9	1.05	1.60	0.20	0.35	29.6	29.6	12.1
55	2	1	369	0	4.1	0.75	1.30	0.30	0.55	27.2	27.2	13.0
56	2	1	376	0	5.8	0.90	1.75	0.20	0.40	31.8	331.8	20.9
57	2	1	384	0	6.5	1.10	1.85	0.50	0.65	33.6	33.6	15.0
58	2	1	394	0	4.2	0.90	1.15	0.35	0.40	31.3	31.3	19.1
59	2	1	406	0	8.5	1.35	2.00	0.30	0.45	39.7	39.9	11.5
60	2	1	415	0	6.2	0.95	1.30	0.20	0.25	34.4	34.4	16.5
61	2	1	427	0	7.1	1.15	1.65	0.30	0.40	34.3	34.3	19.7
62	2	1	435	0	5.6	1.60	2.10	0.25	0.40	44.6	44.6	29.7
63	2	1	443	0	7.0	0.85	1.70	0.25	0.40	32.0	32.0	17.5
64	2	1	454	0	6.6	1.20	1.60	0.40	0.65	33.6	33.6	18.7
65	2	1	461	0	7.0	1.40	1.80	0.35	0.55	35.8	35.8	15.6
66	2	1	468	0	5.9	0.85	1.10	0.25	0.40	39.7	39.7	13.2
67	2	2	478	0	6.0	1.45	1.60	0.30	0.45	35.1	35.1	17.5
68	2	2	484	0	6.3	1.15	1.45	0.30	0.45	35.6	35.6	25.9
69	2	2	491	0	6.3	1.15	1.35	0.25	0.40	34.2	34.2	23.5
70	2	2	496	0	6.5	0.90	1.70	0.40	0.60	41.4	41.4	18.7
71	2	2	503	0		0.90	1.15	0.50	0.70			
72	2	2	504	2	5.8	1.55	1.45	0.20	0.30	47.0		
73	2	2	511	0	6.5	1.10	1.50	0.25	0.45	40.4	40.4	23.4
74	2	2	520	0	7.8	0.95	1.25	0.15	0.25	45.8	45.8	25.0
75	2	2	525	0	6.8	1.00	1.60	0.30	0.40	44.2	44.2	23.0
76	2	2	536	0	6.8	1.25	1.25	0.20	0.25	39.5	39.5	24.5
77	2	2	545	0	5.8	1.15	1.50	0.10	0.15	32.7	32.7	16.0
78	2	2	555	0	6.2	1.35	1.40	0.25	0.40	34.5	34.5	18.3
79	2	2	563	0	5.5	0.80	1.10	0.20	0.45	31.5	31.5	17.2
80	2	2	570	0	6.4	1.40	1.75	0.15	0.20	38.2	38.2	18.7
81	2	2	577	0	4.1	0.50	1.05	0.20	0.25	29.5	29.5	22.0
82	2	2	584	0	5.4	0.70	1.50	0.15	0.20	32.6	32.6	24.1
83	2	2	591	0	7.4	0.80	1.55	0.15	0.40	40.2	40.2	24.1
84	2	2	600	1	7.0	1.25	1.90	0.05	0.10	37.3	37.3	23.7
85	2	2	608	0	5.7	0.65	1.15	0.15	0.30	37.1	37.1	24.6
86	2	2	619	0	4.9	0.75	1.25	0.25	0.40	36.0	36.0	24.4
87	2	3	628	0	8.5	1.65	2.25	0.35	0.40	37.6	37.6	14.0
88	2	3	636	0	7.2	1.65	2.20	0.25	0.35	35.1	35.1	20.4

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				S				R	R	S	C	C
				T	D	H	S	D	A	T	R	R
	B	L	P	A	B	R	A	0	1	L	H	T
O	O	L	T	T	H	T	P	5	0	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	5	5	5	5	5	5	5	5	5
89	2	3	641	0	7.1	0.70	1.60	0.10	0.15	34.6	34.6	12.0
90	2	3	650	0	7.3	1.00	1.70	0.25	0.35	35.0	35.0	12.4
91	2	3	655	0	8.8	1.55	3.00	0.15	0.20	41.7	41.7	23.0
92	2	3	660	0	7.2	1.30	1.55	0.30	0.40	39.6	39.6	22.3
93	2	3	666	0	6.6	1.60	1.60	0.20	0.35	37.5	37.5	17.7
94	2	3	671	0	5.2	0.80	1.65	0.10	0.15	33.7	33.7	21.0
95	2	3	680	0	7.3	0.95	2.05	0.25	0.40	37.3	37.3	13.7
96	2	3	699	0	6.1	0.90	2.00	0.30	0.50	35.0	35.0	21.1
97	2	3	706	0	6.4	0.80	2.00	0.40	0.50	32.5	32.5	20.6
98	2	3	716	0	6.1	1.35	1.50	0.20	0.35	29.5	29.5	13.6
99	2	3	723	0	8.2	1.70	1.25	0.25	0.35	39.4	39.4	20.5
100	2	3	731	0	8.0	1.65	1.95	0.15	0.20	37.2	37.2	22.8
101	2	3	740	0	4.4	0.80	1.00	0.25	0.35	28.3	28.3	20.0
102	2	4	745	0	6.1	1.30	1.00	0.30	0.45	33.8	33.8	10.0
103	2	4	753	0	5.3	0.95	1.30	0.20	0.35	31.0	31.0	13.5
104	2	4	759	0	5.1	1.20	1.10	0.20	0.25	36.8	36.8	23.7
105	2	4	768	0	5.4	1.50	0.95	0.20	0.35	32.4	32.4	21.4
106	2	4	773	0	6.4	1.10	1.35	0.20	0.30	35.0	35.0	19.4
107	2	4	779	0	6.9	1.10	1.10	0.15	0.25	28.6	28.6	14.5
108	2	4	789	0	6.1	0.95	1.25	0.20	0.40	34.9	34.9	22.7
109	2	4	794	0	5.2	0.90	1.30	0.30	0.35	32.0	32.0	12.0
110	2	4	800	0	3.8	0.75	1.00	0.35	0.45	23.1	23.1	13.6
111	2	4	810	0	4.8	1.00	1.25	0.15	0.20	33.1	33.1	18.8
112	2	4	819	0	6.7	1.30	1.90	0.25	0.35	39.4	39.4	22.8
113	2	4	826	0	6.1	1.40	1.25	0.25	0.40	38.1	38.1	18.5
114	2	4	831	0	4.9	1.00	1.05	0.35	0.50	29.6	29.6	18.3
115	2	4	836	0	5.4	1.25	1.35	0.40	0.50	33.8	33.8	14.1
116	2	4	842	0	7.9	1.20	1.85	0.20	0.40	39.4	39.4	20.0
117	3	1	5	0	8.8	2.25	1.65	0.45	0.65	37.0	37.0	6.0
118	3	1	11	0	7.6	2.15	1.20	0.35	0.50	35.0	35.0	9.0
119	3	1	16	0	5.3	1.55	0.80	0.40	0.60	34.0	34.0	6.0
120	3	1	22	0	3.6	1.50	0.40	0.35	0.65	25.0	25.0	10.0
121	3	1	27	0	3.6	1.25	0.50	0.40	0.80	21.0	21.0	4.0
122	3	1	34	0	3.9	1.30	0.50	0.40	0.75	24.0	24.0	4.0
123	3	1	39	0	5.6	1.60	1.00	0.30	0.45	25.0	25.0	3.0
124	3	1	44	0	8.1	2.50	1.65	0.30	0.40	37.0	37.0	5.0
125	3	1	50	0	5.3	1.60	0.50	0.35	0.60	27.0	27.0	5.0
126	3	1	56	0	3.3	1.00	0.40	0.30	0.60	20.0	20.0	5.0
127	3	1	61	0	4.0	1.10	0.80	0.25	0.45	24.0	24.0	4.0
128	3	1	67	0	5.1	1.10	1.45	0.40	0.75	24.0	24.0	2.0
129	3	2	73	0	3.0	0.40	1.10	0.45	0.75	14.0	14.0	2.0
130	3	2	78	0	7.9	1.75	1.10	0.35	0.50	30.0	30.0	6.0
131	3	2	83	0	6.4	1.75	1.25	0.25	0.50	13.0	17.0	3.0
132	3	2	88	0	2.5	1.00	0.25	0.40	0.75	19.0	19.0	2.0

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	L	P	A	B	R	A	O	1	L	H	T
O	O	L	T	T	H	T	P	5	0	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	5	5	5	5	5	5	5	5	5
133	3	2	93	0	2.0	1.10	0.25	0.35	0.50	13	13	4
134	3	2	99	0	7.1	2.00	1.10	0.25	0.40	37	37	6
135	3	2	105	0	1.7	0.50	0.25	0.25	0.45	11	11	1
136	3	2	110	0	4.6	1.75	0.65	0.35	0.70	32	32	6
137	3	2	115	0	3.5	0.50	1.10	0.35	0.65	19	15	3
138	3	2	120	0	2.3	0.75	1.00	0.35	0.60	16	16	3
139	3	2	125	0	3.3	1.35	0.30	0.40	0.70	26	26	4
140	3	2	130	0	7.3	1.40	1.90	0.40	0.75	31	31	7
141	3	2	135	0	6.9	2.00	1.25	0.40	0.75	32	32	8
142	3	2	140	0	5.0	1.65	1.00	0.25	0.50	31	31	8
143	3	2	145	0	6.5	1.70	1.05	0.35	0.65	41	40	7
144	3	2	150	0	5.7	1.30	1.35	0.40	0.75	29	29	7
145	3	2	155	0	5.6	1.15	1.75	0.30	0.50	34	34	7
146	3	2	160	0	2.8	0.90	0.75	0.35	0.60	20	20	3
147	3	2	165	0	6.5	1.40	2.15	0.20	0.30	38	38	6
148	3	2	170	0	7.6	1.50	1.75	0.25	0.40	37	37	15
149	3	2	175	0	7.8	2.00	1.75	0.30	0.40	39	39	10
150	3	3	182	0	3.4	0.65	0.90	0.35	0.50	19	19	6
151	3	3	188	0	8.6	1.75	1.65	0.30	0.60	37	37	11
152	3	3	197	0	4.4	1.90	0.35	0.40	0.65	22	22	3
153	3	3	203	0	4.6	1.10	0.75	0.40	0.70	26	26	5
154	3	3	208	0	6.0	2.30	0.85	0.40	0.75	36	36	4
155	3	3	215	0	6.1	1.05	0.85	0.35	0.60	31	30	7
156	3	3	220	0	4.9	0.90	0.65	0.35	0.55	33	33	10
157	3	3	227	0	7.7	1.80	1.35	0.35	0.60	38	37	5
158	3	3	234	1	3.5	0.50	1.05	0.20	0.40	19	14	3
159	3	3	239	0	4.9	1.50	0.85	0.25	0.45	25	25	6
160	3	3	244	0	5.5	1.50	0.60	0.30	0.50	29	27	6
161	3	3	250	0	5.6	1.75	0.60	0.30	0.60	26	26	3
162	3	3	257	0	4.2	1.05	0.85	0.30	0.55	22	22	5
163	3	3	264	0	6.7	1.15	1.90	0.35	0.70	32	32	6
164	3	4	270	0	8.1	2.05	1.00	0.25	0.45	34	34	9
165	3	4	276	0	8.1	1.40	1.50	0.30	0.45	39	39	10
166	3	4	281	0	3.6	1.25	0.50	0.35	0.65	24	24	4
167	3	4	286	0	3.0	0.95	0.40	0.35	0.75	19	19	4
168	3	4	291	0	6.0	1.60	1.15	0.45	0.80	33	33	5
169	3	4	296	0	5.3	0.75	1.50	0.40	0.70	30	30	6
170	3	4	301	0	2.8	1.60	0.50	0.50	0.95	18	18	3
171	3	4	307	0	8.2	2.25	1.70	0.40	0.85	34	34	6
172	3	4	312	0	3.2	1.30	0.20	0.30	0.65	19	19	6
173	3	4	317	0	5.1	1.15	0.70	0.45	0.85	32	32	6
174	3	4	322	0	4.9	1.50	0.40	0.25	0.40	28	28	7
175	3	4	327	0	5.1	0.90	1.25	0.40	0.60	34	34	9
176	3	4	332	0	2.3	0.50	0.70	0.35	0.50	17	17	3

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				S				R	R	S	C	C
				T	D	H	S	A	A	T	R	R
	B	L	P	A	B	R	A	O	1	L	H	T
O	O	L	T	T	H	T	P	5	0	N	T	P
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	5	5	5	5	5	5	5	5	5
177	3	4	337	0	10.5	2.90	1.70	0.45	0.65	42	42	4
178	3	5	342	0	6.2	1.60	0.80	0.40	0.70	28	28	7
179	3	5	345	0	9.0	3.20	0.40	0.45	0.90	37	37	4
180	3	5	350	0	5.8	1.75	1.00	0.40	0.70	32	32	5
181	3	5	355	0	4.6	1.00	1.15	0.50	0.95	22	22	3
182	3	5	360	0	3.2	0.75	0.55	0.50	0.85	19	19	4
183	3	5	365	0	4.9	0.75	1.35	0.35	0.60	25	25	4
184	3	5	370	0	6.9	1.75	0.65	0.45	0.85	36	36	2
185	3	5	375	0	6.0	1.40	1.00	0.30	0.70	26	26	4
186	3	5	380	0	5.0	1.75	0.90	0.40	0.75	26	26	5
187	3	5	385	0	5.7	1.60	0.85	0.45	0.75	28	28	6
188	3	5	390	0	5.0	1.00	1.25	0.45	0.75	27	27	4
189	3	5	395	0	6.3	0.80	2.50	0.30	0.55	23	23	4
190	3	5	400	0	3.3	0.60	1.05	0.35	0.55	23	23	6
191	3	5	405	0	2.6	0.45	0.80	0.30	0.60	19	19	4
192	3	5	410	0	2.7	0.85	0.85	0.40	0.80	19	19	3
193	3	5	415	0	4.9	1.50	0.75	0.30	0.60	28	28	6
194	3	5	420	0	7.0	1.55	0.95	0.45	0.95	29	29	8
195	3	5	425	0	5.2	0.75	1.70	0.45	0.85	27	27	7
196	3	5	430	0	6.4	1.20	1.50	0.50	0.95	28	28	4

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	B	L	P	T	S	D	S	H	R	A	R	S	C	C
	O	O	L	T	A	B	A	R	T	D	A	M	R	R
	B	C	O	A	9	9	9	9	9	9	9	9	9	9
	S	K	T	G	7	7	7	7	7	7	7	7	7	7
1	1	1	8	0	8.0	2.05	1.05	0.040	0.065	44	44	20		
2	1	1	17	0	7.9	1.65	2.15	0.140	0.230	42	42	21		
3	1	1	23	0	6.3	1.15	1.65	0.120	0.190	44	44	21		
4	1	1	29	0	8.7	1.75	2.45	0.105	0.195	49	49	27		
5	1	1	38	0	6.3	1.30	1.30	0.095	0.140	41	41	23		
6	1	1	43	0	7.9	1.40	1.30	0.070	0.120	44	44	24		
7	1	1	48	0	7.4	1.65	1.15	0.045	0.065	41	41	27		
8	1	1	57	0	7.0	1.45	1.50	0.140	0.235	42	42	24		
9	1	1	62	0	7.6	1.05	2.05	0.120	0.220	40	40	21		
10	1	1	70	0	7.7	1.30	2.75	0.255	0.230	44	44	23		
11	1	2	79	0	7.6	1.45	1.75	0.070	0.115	41	41	23		
12	1	2	87	0	7.2	1.45	1.30	0.060	0.090	42	42	27		
13	1	2	96	0	7.6	1.45	2.00	0.165	0.225	39	39	19		
14	1	2	106	0	6.3	1.05	1.60	0.065	0.090	42	25	20		
15	1	2	116	0	7.4	1.30	1.65	0.045	0.105	38	21	9		
16	1	2	124	0	7.3	1.65	1.75	0.090	0.195	38	35	27		
17	1	2	135	0	7.2	1.40	1.90	0.095	0.170	43	43	20		
18	1	2	143	0	6.3	1.10	1.55	0.055	0.115	36	20	13		
19	1	2	152	0	7.4	1.35	2.35	0.095	0.140	49	49	20		
20	1	2	159	0	6.8	1.25	1.70	0.065	0.105	37	37	19		
21	1	3	169	0	5.4	0.80	1.00	0.045	0.080	37	37	21		
22	1	3	174	0	6.3	1.15	1.80	0.050	0.105	38	38	26		
23	1	3	180	0	7.0	0.80	1.25	0.045	0.080	41	41	26		
24	1	3	187	0	6.2	1.25	1.55	0.050	0.085	31	31	14		
25	1	3	193	0	4.3	0.30	1.35	0.040	0.080	38	38	27		
26	1	3	198	0	8.4	0.70	1.50	0.060	0.135	46	46	19		
27	1	3	205	1	6.6	1.40	1.35	0.060	0.130	44	25	22		
28	1	3	210	1	6.2	0.65	1.40	0.065	0.105	41	25	23		
29	1	3	214	0	8.1	1.95	1.15	0.080	0.130	48	48	26		
30	1	3	218	1	7.2	1.05	1.90	0.065	0.120	41	25	22		
31	1	3	219	0	4.1	0.85	0.85			25	35	26		
32	1	3	224	0	5.5	0.65	1.00	0.030	0.070	44	44	27		
33	1	3	229	0	6.5	1.00	1.40	0.035	0.070	43	43	24		
34	1	3	234	0	6.6	1.35	1.40	0.040	0.070	45	45	26		
35	1	4	240	0	8.1	0.70	2.20	0.115	0.170	49	49	23		
36	1	4	246	0	7.3	1.60	1.30	0.060	0.105	46	32	28		
37	1	4	250	2	5.9			0.080	0.165	40				
38	1	4	251	0	8.0	1.30	1.35	0.090	0.150	47	47	26		
39	1	4	257	0	7.1	1.05	1.80	0.065	0.125	44	44	26		
40	1	4	263	0	6.2	1.05	1.30	0.070	0.125	43	43	27		
41	1	4	269	0	6.8	1.95	0.90	0.075	0.130	47	47	29		
42	1	4	276	2	7.6					41				
43	1	4	277	0	7.5	1.80	1.50	0.110	0.180	47	47	25		
44	1	4	282	0	7.8	1.60	1.40	0.070	0.105	52	52	29		

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	B	L	P	T	S	D	S	H	R	A	R	S	C	C
	O	O	L	T	A	B	A	R	T	D	A	M	R	R
	B	C	O	A	9	9	9	9	9	9	9	9	9	9
	S	K	T	G	7	7	7	7	7	7	7	7	7	7
45	1	4	286	2	7.0				0.040	0.095	44			
46	1	4	288	0	6.3	0.95	0.85		0.115	0.190	39	39	24	
47	1	4	290	2	7.6				0.045	0.120	48			
48	1	4	293	0	7.1	1.25	1.30		0.050	0.090	44	44	24	
49	1	4	298	0	8.8	1.90	1.20		0.055	0.110	42	42	21	
50	1	4	305	0	7.3	1.55	1.35		0.080	0.130	41	41	20	
51	1	4	311	0	8.0	1.35	2.10		0.040	0.215	45	45	26	
52	1	4	317	0	7.6	1.50	2.15		0.090	0.155	48	30	22	
53	1	4	319	1	7.3	1.15	1.85		0.040	0.090	40	25	20	
54	1	4	322	0	8.0	0.95	1.65		0.055	0.105	47	30	26	
55	2	1	327	0	6.5	1.15	2.15				38	38	26	
56	2	1	341	0	5.9	1.15	1.40				36	36	21	
57	2	1	350	0	4.4	0.55	1.20		0.050	0.090	30	30	19	
58	2	1	363	0	5.9	1.25	1.55		0.050	0.070	31	31	19	
59	2	1	370	0	4.4	0.75	1.00		0.070	0.130	32	32	19	
60	2	1	377	0	4.5	0.90	1.20		0.040	0.095	33	33	17	
61	2	1	387	0	4.8	1.00	1.15		0.045	0.105	31	16	10	
62	2	1	396	0	4.3	0.75	1.15		0.030	0.060	32	17	13	
63	2	1	407	0	5.2	1.10	0.95				36	36	17	
64	2	1	416	0	8.1	1.50	2.15		0.080	0.155	39	39	16	
65	2	1	428	0	4.1	0.85	0.90		0.050	0.070	24	24	16	
66	2	1	436	0	7.0	0.85	1.65		0.030	0.150	40	40	24	
67	2	1	445	0	6.4	1.10	1.10		0.060	0.105	42	42	22	
68	2	1	455	0	6.1	1.15	1.45		0.065	0.080	41	41	20	
69	2	1	462	0	7.5	1.40	1.90		0.045	0.090	38	38	17	
70	2	1	470	0	6.0	0.90	1.10		0.055	0.120	41	26	17	
71	2	2	480	0	8.3	0.75	2.10		0.050	0.070	45	45	19	
72	2	2	486	0	5.5	1.35	1.30		0.045	0.090	34	34	14	
73	2	2	492	0	2.9	0.45	1.45				31	30	22	
74	2	2	497	0	4.2	0.75	1.10		0.030	0.055	32	32	17	
75	2	2	506	0	5.7	1.05	1.15		0.030	0.055	41	41	24	
76	2	2	512	0	6.8	1.10	1.85		0.065	0.085	40	40	26	
77	2	2	521	0	6.0	1.20	1.90		0.070	0.125	37	37	18	
78	2	2	526	0	7.9	1.30	1.85		0.100	0.145	49	49	25	
79	2	2	538	0	6.3	1.30	1.20		0.055	0.085	37	37	20	
80	2	2	547	0	6.0	0.80	1.40		0.020	0.040	40	40	23	
81	2	2	557	0	3.5	0.65	1.20		0.085	0.125	29	29	20	
82	2	2	564	0	6.8	0.90	1.80		0.050	0.080	36	36	22	
83	2	2	572	0	5.4	0.70	1.70		0.035	0.070	33	33	19	
84	2	2	579	0	7.0	1.65	1.90		0.060	0.105	42	42	19	
85	2	2	585	0	5.9	1.10	1.20		0.030	0.070	32	32	16	
86	2	2	592	0	4.4	0.60	1.05		0.045	0.070	28	28	15	
87	2	2	600	2	7.1				0.035	0.070	39			
88	2	2	603	0	7.1	1.90	1.55		0.065	0.100	35	35	21	

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	B	L	P	S	D	S	H	R	R	S	C	C
	L	P	T	A	B	A	R	D	A	T	R	R
O	O	L	T	A	B	A	R	D	A	T	R	R
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	7	7	7	7	7	7	7	7	7
89	2	2	608	2	5.6	.	.	0.030	0.060	39	.	.
90	2	2	614	0	5.1	1.15	0.70	0.075	0.105	32	32	12
91	2	2	621	0	6.0	1.50	1.50	.	.	26	26	42
92	2	3	631	0	6.9	1.20	1.80	0.040	0.075	37	37	14
93	2	3	637	0	6.1	0.95	1.65	0.030	0.050	36	36	24
94	2	3	645	0	6.9	0.75	2.30	0.040	0.070	44	44	18
95	2	3	651	0	6.4	1.10	1.70	0.015	0.040	41	41	28
96	2	3	656	0	6.9	1.30	1.40	0.075	0.095	39	39	24
97	2	3	661	0	6.6	1.10	1.30	0.045	0.070	41	41	20
98	2	3	667	0	6.2	1.00	1.55	.	.	34	34	14
99	2	3	672	0	6.9	1.45	1.40	.	.	39	39	22
100	2	3	686	0	4.4	0.90	0.75	0.030	0.065	30	30	18
101	2	3	700	0	7.9	1.55	2.25	0.080	0.130	39	39	16
102	2	3	712	0	6.1	0.95	1.15	.	.	34	34	19
103	2	3	717	0	7.3	1.20	1.45	0.040	0.095	37	37	19
104	2	3	724	0	8.6	1.40	2.45	0.065	0.105	48	48	22
105	2	3	733	0	5.5	0.80	1.45	0.040	0.080	30	30	20
106	2	4	742	0	3.8	0.85	0.85	0.065	0.125	31	31	18
107	2	4	746	0	5.2	0.70	1.40	0.065	0.125	32	32	19
108	2	4	754	0	5.6	0.75	1.40	0.055	0.090	35	35	19
109	2	4	760	0	4.9	1.10	2.35	0.040	0.090	31	31	15
110	2	4	769	0	5.4	1.10	1.25	0.045	0.090	38	38	23
111	2	4	774	0	4.6	0.95	1.35	0.030	0.075	33	33	18
112	2	4	783	0	4.6	0.85	0.85	0.035	0.075	35	35	21
113	2	4	790	0	5.1	0.70	1.70	0.030	0.065	34	34	20
114	2	4	795	0	6.6	1.15	1.25	0.045	0.080	37	37	20
115	2	4	801	0	5.2	0.95	1.15	0.045	0.065	34	34	19
116	2	4	811	0	5.1	0.95	1.70	0.055	0.130	34	34	19
117	2	4	821	0	6.7	1.15	1.35	0.055	0.105	40	40	19
118	2	4	827	0	6.3	1.30	1.30	0.030	0.080	38	38	21
119	2	4	830	2	6.1	.	.	0.065	0.170	39	.	.
120	2	4	832	0	5.0	0.95	1.15	0.040	0.070	33	33	20
121	2	4	838	0	6.2	1.75	1.80	0.045	0.090	33	33	17
122	2	4	843	0	4.7	0.70	1.15	0.030	0.070	32	32	16
123	3	1	6	0	6.0	0.85	1.60	0.060	0.130	28	28	9
124	3	1	12	0	9.9	1.95	2.55	0.055	0.195	32	32	10
125	3	1	17	0	8.5	1.20	2.15	0.055	0.130	44	44	19
126	3	1	23	0	4.0	0.65	1.00	0.105	0.240	24	24	9
127	3	1	28	0	3.3	0.90	0.80	0.105	0.205	17	17	10
128	3	1	35	0	3.7	0.40	1.05	0.100	0.230	22	22	8
129	3	1	40	0	4.5	0.55	1.30	0.095	0.200	26	26	8
130	3	1	45	0	8.0	1.35	2.00	0.120	0.255	42	42	15
131	3	1	51	0	4.9	1.35	1.15	0.095	0.220	30	30	8
132	3	1	57	0	4.8	1.35	0.75	0.055	0.180	24	20	4

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	B	L	P	S	D	S	H	R	R	S	C	C
	L	P	T	A	B	A	R	D	A	T	R	R
O	O	L	T	A	B	A	R	D	A	T	R	R
B	C	O	A	9	9	9	9	9	9	9	9	9
S	K	T	G	7	7	7	7	7	7	7	7	7
133	3	1	62	0	5.5	0.65	1.60	0.085	0.195	26	26	6
134	3	1	68	0	5.6	0.65	1.75	0.075	0.190	26	26	6
135	3	2	74	0	2.8	0.65	0.50	0.105	0.240	20	20	6
136	3	2	79	0	4.1	0.80	0.85	0.115	0.290	15	15	4
137	3	2	84	0	2.1	0.50	0.50	0.120	0.270	17	17	5
138	3	2	89	0	8.2	1.30	1.00	0.105	0.260	46	46	17
139	3	2	94	0	5.8	1.00	1.60	0.190	0.415	24	24	9
140	3	2	100	0	6.1	0.80	1.55	0.080	0.155	29	29	13
141	3	2	106	0	2.0	0.30	0.55	0.070	0.190	9	9	3
142	3	2	111	0	2.8	0.45	0.70	0.200	0.480	16	16	3
143	3	2	116	0	3.7	0.50	1.20	0.210	0.480	22	22	4
144	3	2	121	0	2.5	0.60	0.50	0.165	0.335	18	18	4
145	3	2	126	0	5.8	1.50	0.70	0.055	0.145	38	38	26
146	3	2	131	0	2.8	0.55	0.75	0.105	0.235	14	14	4
147	3	2	136	0	7.8	1.80	1.50	0.170	0.330	41	41	17
148	3	2	141	0	7.0	1.30	1.40	0.145	0.270	38	38	23
149	3	2	146	0	6.8	1.80	1.45	0.090	0.175	35	35	13
150	3	2	151	0	8.5	1.45	2.15	0.065	0.140	39	39	19
151	3	2	156	0	5.4	0.70	1.60	0.070	0.155	30	30	13
152	3	2	161	0	7.2	1.30	1.60	0.105	0.220	42	42	15
153	3	2	166	0	7.2	2.15	0.90	0.100	0.215	42	42	12
154	3	2	171	0	4.3	0.90	1.35	0.060	0.125	27	27	12
155	3	3	177	0	5.6	0.65	1.50	0.055	0.195	21	15	5
156	3	3	183	0	4.1	1.45	0.65	0.130	0.305	24	24	11
157	3	3	189	0	5.5	1.55	1.10	0.120	0.280	27	27	8
158	3	3	197	0	5.6	1.75	0.45	0.155	0.355	27	27	6
159	3	3	204	0	5.0	0.80	1.30	0.090	0.240	24	24	5
160	3	3	209	0	6.8	2.45	1.05	0.145	0.300	31	31	10
161	3	3	215	0	8.6	1.95	1.80	0.095	0.220	40	40	15
162	3	3	221	0	4.8	1.35	0.60	0.070	0.160	31	31	15
163	3	3	228	0	5.1	1.50	1.00	0.145	0.300	33	33	13
164	3	3	236	0	4.8	1.20	0.50	0.065	0.180	25	25	6
165	3	3	240	0	4.7	0.95	1.10	0.070	0.165	29	29	12
166	3	3	245	0	8.0	2.00	1.15	0.080	0.165	38	38	11
167	3	3	251	0	4.9	1.15	1.05	0.160	0.340	23	23	6
168	3	3	259	0	3.8	0.80	0.70	0.055	0.140	21	14	7
169	3	3	264	0	2.9	0.65	0.90	0.090	0.170	25	22	16
170	3	4	271	0	5.3	0.65	1.45	0.070	0.190	33	33	11
171	3	4	277	0	3.2	0.45	0.80	0.065	0.155	27	27	11
172	3	4	282	0	5.2	1.40	0.75	0.095	0.215	31	31	9
173	3	4	287	0	5.8	0.85	1.35	0.095	0.250	29	29	9
174	3	4	292	0	7.3	1.90	1.60	0.135	0.290	30	30	9
175	3	4	297	0	3.7	0.95	0.60	0.090	0.215	25	25	7
176	3	4	302	0	2.4	0.50	0.50	0.045	0.115	20	20	10

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	B	L	P	T	S	H	R	R	S	C	C
	O	B	S	A	D	P	D	A	M	N	N
	O	C	O	A	H	P	0	1	L	T	H
	S	K	T	G	7	7	7	7	7	7	7
177	3	4	308	0	3.4	0.20	1.30	0.075	0.200	27	10
178	3	4	313	0	7.1	1.95	1.55	0.095	0.220	31	9
179	3	4	318	0	7.6	1.60	2.45	0.115	0.265	38	10
180	3	4	323	0	4.9	1.05	1.10	0.095	0.200	26	12
181	3	4	328	0	4.8	0.70	1.20	0.080	0.185	34	13
182	3	4	333	0	5.5	0.90	1.75	0.140	0.285	29	10
183	3	4	338	0	6.8	1.75	0.85	0.105	0.275	31	6
184	3	5	343	0	6.4	0.80	1.25	0.070	0.170	29	6
185	3	5	346	0	4.8	1.45	0.65	0.105	0.245	30	11
186	3	5	351	0	3.6	0.65	1.00	0.125	0.255	24	4
187	3	5	356	0	3.4	1.40	0.25	0.165	0.360	20	5
188	3	5	361	0	3.0	0.70	0.55	0.115	0.260	18	5
189	3	5	366	0	5.5	2.00	0.85	0.130	0.290	31	12
190	3	5	371	0	4.8	1.30	0.55	0.070	0.160	27	9
191	3	5	376	0	6.7	2.00	0.90	0.080	0.205	27	7
192	3	5	381	0	2.6	0.40	0.65	0.090	0.190	18	4
193	3	5	386	0	2.2	0.20	0.65	0.105	0.280	21	9
194	3	5	391	0	8.6	2.85	1.10	0.030	0.070	36	9
195	3	5	396	0	6.3	1.20	1.55	0.140	0.335	30	7
196	3	5	401	0	4.3	1.25	0.70	0.080	0.195	28	15
197	3	5	406	0	3.8	1.20	0.50	0.105	0.260	23	11
198	3	5	411	0	7.1	1.35	1.75	0.145	0.355	34	6
199	3	5	416	0	4.6	0.85	0.85	0.120	0.290	21	5
200	3	5	421	0	7.5	2.00	1.80	0.095	0.220	33	7
201	3	5	426	0	2.6	0.80	0.30	0.065	0.190	21	10
202	3	5	431	0	4.5	1.45	0.40	0.095	0.240	26	6
203	4	1	437	0	4.3	0.45	1.70	0.090	0.180	29	13
204	4	1	442	0	4.1	1.10	0.65	0.015	0.105	28	13
205	4	1	447	0	5.2	1.20	1.30	0.100	0.255	27	6
206	4	1	452	0	4.1	0.50	1.35	0.100	0.250	28	7
207	4	1	457	0	4.4	0.55	1.25	0.090	0.170	29	13
208	4	1	460	2	4.7			0.155	0.405	26	13
209	4	1	463	0	4.2	0.50	0.65	0.050	0.185	28	14
210	4	1	468	0	7.0	1.30	1.55	0.155	0.390	30	9
211	4	1	473	0	4.4	0.55	1.55	0.120	0.265	29	13
212	4	1	475	1	3.6	0.65	1.00	0.075	0.215	26	15
213	4	1	478	0	5.3	1.05	1.30	0.070	0.185	32	10
214	4	1	483	0	4.1	0.90	0.85	0.040	0.145	32	15
215	4	1	488	0	4.4	0.90	0.75	0.070	0.155	28	13
216	4	1	493	0	4.2	1.35	0.95	0.120	0.280	28	13
217	4	1	498	0	3.6	0.50	1.40	0.030	0.120	24	6
218	4	1	504	0	3.2	0.65	0.60	0.115	0.260	21	7
219	4	1	509	0	2.0	0.10	0.75	0.135	0.250	15	3
220	4	1	514	0	4.8	0.60	1.45	0.080	0.250	30	11

Listing of Ident (1990) + Observed (1991-97) 102
08:11 Thursday, October 15, 1998

	B	L	P	T	S	H	R	R	S	C	C
	O	B	S	A	D	P	D	A	M	N	N
	O	C	O	A	H	P	0	1	L	T	H
	S	K	T	G	7	7	7	7	7	7	7
221	4	1	522	0	3.4	0.70	0.80	0.130	0.300	22	6
222	4	1	527	0	3.6	0.80	0.75	0.055	0.200	25	11
223	4	1	532	0	3.1	0.30	1.10	0.070	0.205	23	10
224	4	2	537	0	4.8	0.65	1.55	0.080	0.185	25	9
225	4	2	543	0	2.8	0.55	0.75	0.095	0.210	18	8
226	4	2	552	0	4.8	0.80	1.15	0.080	0.220	24	5
227	4	2	560	0	3.9	1.10	0.50	0.075	0.200	21	6
228	4	2	566	0	6.8	1.75	1.35	0.105	0.265	29	9
229	4	2	572	0	4.7	1.50	0.90	0.105	0.210	23	6
230	4	2	578	0	4.6	0.75	1.30	0.095	0.215	23	6
231	4	2	585	0	3.8	0.60	0.90	0.055	0.170	16	8
232	4	2	592	0	4.2	1.10	0.60	0.055	0.175	23	7
233	4	2	598	0	4.0	0.75	0.95	0.065	0.175	21	5
234	4	2	607	0	2.7	0.80	0.30	0.040	0.110	14	6
235	4	2	614	0	3.3	0.90	0.40	0.085	0.190	22	10
236	4	2	619	0	2.2	0.25	0.55	0.045	0.140	13	4
237	4	2	627	0	5.1	1.45	0.65	0.075	0.230	25	8
238	4	2	632	0	2.7	0.65	0.35	0.090	0.220	16	4
239	4	2	640	0	4.5	0.85	1.45	0.105		24	9
240	4	2	647	0	2.5	0.35	1.00	0.105	0.215	19	8
241	4	3	652	0	5.8	0.45	1.95	0.125	0.330	27	6
242	4	3	654	0	3.9	0.40	1.95	0.105	0.245	25	10
243	4	3	659	0	2.2	0.30	0.80	0.115	0.265	15	3
244	4	3	664	0	5.1	0.60	1.90	0.120	0.320	23	5
245	4	3	669	0	3.6	0.35	1.15	0.095	0.205	21	6
246	4	3	674	0	4.1	0.65	1.35	0.140	0.365	23	6
247	4	3	680	0	4.2	1.00	0.45	0.120	0.295	17	5
248	4	3	685	0	4.0	0.35	1.45	0.105	0.295	24	6
249	4	3	691	0	3.4	0.35	0.85	0.065	0.170	22	10
250	4	3	696	0	4.2	1.25	1.15	0.175	0.390	23	13
251	4	3	701	0	3.9	1.05	0.65	0.120	0.305	22	6
252	4	3	706	0	4.0	0.55	1.40	0.080	0.255	25	9
253	4	3	711	0	4.0	1.00	0.85	0.155	0.355	22	6
254	4	3	716	0	3.4	0.50	1.05	0.110	0.280	21	9
255	4	3	721	0	2.9	0.40	0.95	0.095	0.215	18	7
256	4	3	726	0	4.8	1.45	0.60	0.090	0.190	27	6
257	4	3	731	0	5.6	1.40	0.85	0.110	0.270	25	5
258	4	3	736	0	4.7	1.00	0.95	0.130	0.300	23	6
259	4	3	741	0	4.6	1.30	0.75	0.180	0.375	20	5
260	4	3	746	0	4.6	1.25	0.55	0.115	0.300	20	3
261	4	3	751	0	4.5	1.00	0.75	0.115	0.305	18	5
262	4	3	756	0	3.1	0.65	0.55	0.070	0.175	23	9
263	4	3	761	0	3.7	0.50	0.70	0.100	0.245	20	5
264	4	3	766	0	4.3	1.05	0.55	0.135	0.300	22	5

clist.lst

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52.

Listing of Ident (1990) + Observed (1991-97) 103
 08:11 Thursday, October 15, 1998

				S				R	R	S	C	C
	B			T	D	S	H	A	A	T	R	R
	L	P		A	B	A	R	D	D	M	N	N
O	O	L	T	T	H	P	T	0	1	L	T	H
B	C	O	A	9	9	9	9	5	0	N	P	T
S	K	T	G	7	7	7	7	7	7	7	7	7
265	4	3	771	0	5.5	1.40	0.10	0.175	0.430	22	22	5
266	4	4	776	0	4.2	1.15	0.75	0.145	0.355	17	17	8
267	4	4	784	0	5.6	1.80	0.70	0.145	0.350	21	19	5
268	4	4	789	0	4.0	1.50	0.40	0.145	0.350	23	23	7
269	4	4	797	0	6.6	1.15	2.45	0.275	0.495	31	31	11
270	4	4	803	0	4.7	1.60	0.30	0.070	0.255	19	11	5
271	4	4	808	0	5.7	1.05	1.75	0.170	0.420	28	28	6
272	4	4	815	0	5.0	2.30	0.40	0.210	0.530	23	23	5
273	4	4	823	0	2.8	0.90	0.40	0.085	0.210	19	19	5
274	4	4	833	0	4.9	1.35	1.25	0.190	0.465	19	19	5
275	4	4	839	0	5.5	1.75	0.70	0.095	0.245	23	15	6
276	4	4	847	0	4.1	0.50	1.30	0.140	0.345	19	19	7
277	4	4	854	0	5.2	2.30	0.50	0.155	0.380	23	23	6
278	4	4	860	0	4.7	1.00	0.75	0.075	0.170	21	21	5
279	4	4	865	0	4.5	0.80	0.80	0.070	0.160	21	17	4
280	4	4	871	0	3.7	0.55	0.85	0.080	0.245	20	20	7
281	4	4	877	0	2.9	0.80	0.45	0.080	0.235	14	14	5
282	4	5	884	0	5.3	1.00	0.85	0.120	0.290	27	27	6
283	4	5	887	0	2.7	1.00	0.30	0.100	0.265	15	15	5
284	4	5	892	0	5.4	1.40	1.05	0.085	0.295	23	23	5
285	4	5	897	0	4.3	1.30	0.35	0.100	0.230	24	24	9
286	4	5	902	0	3.5	0.35	1.50	0.120	0.315	20	20	6
287	4	5	907	0	4.1	1.40	0.55	0.155	0.375	19	19	6
288	4	5	912	0	5.8	1.05	0.90	0.105	0.240	27	27	6
289	4	5	917	0	4.5	1.05	0.80	0.245	0.540	23	23	5
290	4	5	922	0	3.5	0.75	1.05	0.145	0.320	20	20	7
291	4	5	927	0	4.3	1.00	0.70	0.065	0.165	23	23	6
292	4	5	932	0	3.4	0.65	0.95	0.105	0.255	19	19	6
293	4	5	937	0	3.2	1.20	0.45	0.145	0.355	20	20	6
294	4	5	942	0	4.4	1.65	0.40	0.135	0.360	20	20	3
295	4	5	947	0	3.9	1.25	0.40	0.095	0.255	19	19	6
296	4	5	952	0	2.3	0.40	0.55	0.110	0.280	11	11	2
297	4	5	957	0	3.4	0.75	0.50	0.080	0.215	12	12	2
298	4	5	962	0	5.0	0.70	0.65	0.230	0.495	21	21	4
299	4	5	967	0	5.5	1.75	1.05	0.105	0.340	23	23	6
300	4	5	972	0	2.5	0.85	0.35	0.090	0.190	15	15	6
301	4	5	977	0	2.8	0.85	0.40	0.105	0.305	15	15	5
302	4	5	982	0	3.9	1.00	0.40	0.100	0.250	18	18	4
303	4	5	987	0	3.5	1.30	0.45	0.110	0.320	16	16	5
304	4	5	992	0	3.5	1.20	0.45	0.080	0.210	20	20	6

chg

Mon Oct 26 07:35:26 1998

1

```

options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
if grd_tree<2 ; grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD1095 RAD0595 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

TITLE "Status=all";
*if stat92 ne 0 then csapba92=.;
*if stat93 ne 0 then csapba93=.;
*if stat94 ne 0 then csapba94=.;
*if stat95 ne 0 then csapba95=.;
*if stat97 ne 0 then csapba97=.;

```


chg

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2

```
proc sort; by block plot grd_tree;
proc means noprint nway; var ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
```

```
libname save '.';
data save.meangrd; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre= .10;
if block=1 and plot=3 then acre= .10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```

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```
proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97
  n_csap92--n_csap97;
```

1

The SAS System

07:35 Monday, October 26, 1998

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commercial purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

real time	0.18 seconds
cpu time	0.14 seconds

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1      options ls=132 ps=55;
2      data t90; infile '90.dat' firstobs=2 delimiter=',' missover;
3      input block plot tag east north crown dbh90 rank grd_tree girdle;
4      if grd_tree<2 ; grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

real time	0.36 seconds
cpu time	0.17 seconds

```
5      proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

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2

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The SAS System

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NOTE: PROCEDURE SORT used:

real time	0.24 seconds
cpu time	0.09 seconds

```
6      data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
7      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
8      CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.

The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.33 seconds
cpu time	0.16 seconds

```
9      proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.22 seconds
cpu time	0.07 seconds

```
10     data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
11     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.19 seconds
cpu time	0.05 seconds

```
12     proc sort; by block plot tag;
```

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

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3

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The SAS System

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NOTE: PROCEDURE SORT used:

real time 0.16 seconds
cpu time 0.03 seconds

```
13      data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;  
14      input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;  
15      sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;  
16      drop stat92x;
```

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.
The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time 0.27 seconds
cpu time 0.07 seconds

```
17      proc sort; by block plot tag;
```

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds
cpu time 0.02 seconds

```
18      data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;  
19      input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;  
20      sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;  
21      drop stat93x;
```

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.
The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).
3 at 20:12 3 at 20:32 3 at 20:51 3 at 20:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time 0.18 seconds

cpu time 0.06 seconds

22 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.14 seconds

cpu time 0.02 seconds

23 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;

24 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;

25 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.16 seconds

cpu time 0.05 seconds

26 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.13 seconds

cpu time 0.00 seconds

27 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;

28 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;

29 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 29:12

11 at 29:32

10 at 29:51

8 at 29:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time

0.18 seconds

cpu time

0.06 seconds

30

proc sort; by block plot tag;

31

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time

0.15 seconds

cpu time

0.02 seconds

32

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

33

if tag;

34

ba90 = (dbh90**2)* .005454;

35

ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

36

ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

37

ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

38

39

woda91=((hrt91+sap91)*2)**2 * .005454;hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

40

woda92=((hrt91+sap91)*2)**2 * .005454;hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

41

woda93=((hrt91+sap91)*2)**2 * .005454;hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

42

woda94=((hrt91+sap91)*2)**2 * .005454;hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

43

woda95=((hrt91+sap91)*2)**2 * .005454;hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

44

woda97=((hrt91+sap91)*2)**2 * .005454;hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

45

46

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

47

csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

48

csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

49

csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

50

csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

51

52

TITLE "Status=all";

53

*if stat92 ne 0 then csapba92=.;

54

*if stat93 ne 0 then csapba93=.;

55

*if stat94 ne 0 then csapba94=.;

56

*if stat95 ne 0 then csapba95=.;

57

*if stat97 ne 0 then csapba97=.;

58

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15

RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25

CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.

RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.

STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0

LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016

HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.

WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
CSAPBA97=. _ERROR_=1 _N_=443
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
CRNTP95=. STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25
RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455
NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1179 at 35:42 1179 at 35:46 1195 at 36:14 1195 at 36:18 1218 at 36:42 1218 at 36:46 1325 at 37:14
1325 at 37:18 1216 at 37:42 1216 at 37:46 1179 at 40:47 1179 at 40:54 1179 at 40:58 1179 at 40:84
1195 at 41:47 1195 at 41:54 1195 at 41:58 1195 at 41:84 1218 at 42:47 1218 at 42:54 1218 at 42:58
1218 at 42:84 1324 at 43:47 1324 at 43:54 1324 at 43:58 1324 at 43:84 1224 at 44:47 1224 at 44:54
1224 at 44:58 1224 at 44:84 1179 at 46:19 1179 at 46:29 1183 at 46:38 1195 at 47:19 1195 at 47:29
1195 at 47:38 1218 at 48:19 1218 at 48:29 1218 at 48:38 1324 at 49:19 1324 at 49:29 1324 at 49:38
1224 at 50:19 1224 at 50:29 1224 at 50:38
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to
missing values.
Each place is given by: (Number of times) at (Line):(Column).
4 at 46:29
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
NOTE: DATA statement used:
real time 1.98 seconds
cpu time 1.13 seconds

59 proc sort; by block plot grd_tree;

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

NOTE: PROCEDURE SORT used:

real time	0.74 seconds
cpu time	0.21 seconds

```
60      proc means noprint nway; var  ba90--ba97 dbh91--crnht97
61          sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
62          output out=mean mean=
63              n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
64
65      libname save '.';
```

NOTE: Libref SAVE was successfully assigned as follows:

Engine: V612
Physical Name: /a/zumbrunn/jobs/jacobi/opt

NOTE: The data set WORK.MEAN has 32 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.26 seconds
cpu time	0.14 seconds

```
66      data save.meangrd; set mean;
67          if block=1 and plot=1 then treat=1;
68          if block=1 and plot=2 then treat=3;
69          if block=1 and plot=3 then treat=4;
70          if block=1 and plot=4 then treat=5;
71          if block=2 and plot=1 then treat=3;
72          if block=2 and plot=2 then treat=5;
73          if block=2 and plot=3 then treat=1;
74          if block=2 and plot=4 then treat=4;
75          if block=3 and plot=1 then treat=2;
76          if block=3 and plot=2 then treat=5;
77          if block=3 and plot=3 then treat=3;
78          if block=3 and plot=4 then treat=4;
79          if block=3 and plot=5 then treat=1;
80          if block=4 and plot=1 then treat=5;
81          if block=4 and plot=2 then treat=3;
82          if block=4 and plot=3 then treat=4;
83          if block=4 and plot=4 then treat=2;
84          if block=4 and plot=5 then treat=1;
85          t_trees = _freq_;
86          hec= .15 * .404686;
87          acre=.15;
88          if block=2 and plot=4 then hec= .10 * .404686;
89          if block=1 and plot=3 then hec= .10 * .404686;
90          if block=2 and plot=4 then acre= .10;
91          if block=1 and plot=3 then acre= .10;
92
93          qmd90=sqrt(ba90/.005454);
94          qmd91=sqrt(ba91/.005454);
95          qmd92=sqrt(ba92/.005454);
96          qmd93=sqrt(ba93/.005454);
97          qmd94=sqrt(ba94/.005454);
```

```
98      qmd95=sqrt(ba95/.005454);
99      qmd97=sqrt(ba97/.005454);
100
101      t_den= t_trees/acre;
102
103      t_ba90=t_trees*ba90/acre;
104      t_ba91=t_trees*ba91/acre;
105      t_ba92=t_trees*ba92/acre;
106      t_ba93=t_trees*ba93/acre;
107      t_ba94=t_trees*ba94/acre;
108      t_ba95=t_trees*ba95/acre;
109      t_ba97=t_trees*ba97/acre;
110
111      t_spba91=t_trees*sap_ba91/acre;
112      t_spba92=t_trees*sap_ba92/acre;
113      t_spba93=t_trees*sap_ba93/acre;
114      t_spba94=t_trees*sap_ba94/acre;
115      t_spba95=t_trees*sap_ba95/acre;
116      t_spba97=t_trees*sap_ba97/acre;
117
```

NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1 at 95:7 1 at 95:16 1 at 96:7 1 at 96:16 9 at 98:7 9 at 98:16 1 at 105:15 1 at 105:20 1 at 106:15
1 at 106:20 9 at 108:15 9 at 108:20 1 at 112:17 1 at 112:26 1 at 113:17 1 at 113:26 9 at 115:17 9 at 115:26
1 at 116:17 1 at 116:26

NOTE: The data set SAVE.MEANGRD has 32 observations and 106 variables.
NOTE: DATA statement used:
real time 1.59 seconds
cpu time 0.10 seconds

```
118      proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97
119      n_csap92--n_csap97;
NOTE: The PROCEDURE PRINT printed pages 1-2.
NOTE: PROCEDURE PRINT used:
real time            0.09 seconds
cpu time            0.06 seconds
```

NOTE: The SAS System used:
real time 7.83 seconds
cpu time 2.66 seconds

chg.lst

Mon Oct 26 07:35:36 1998

1

Status=all

07:35 Monday, October 26, 1998 1

OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
1	0	1	1	1	346.667	97.869	97.869	94.943	109.403	97.709	116.671	106.769	60.7565	50.1167	51.0948
2	0	3	1	2	220.000	59.580	59.580	53.439	68.037	66.385	72.769	64.034	28.6542	18.6721	38.4013
3	100	3	1	2	146.667	41.734	41.734	41.257	44.825	39.930	39.514	37.482	20.6565	16.8774	25.6761
4	0	4	1	3	550.000	111.149	111.149	118.571	106.102	131.397	116.181	121.030	61.0433	56.4636	58.2617
5	100	4	1	3	70.000	19.831	19.831	15.153	14.676	19.481	17.050	17.032	12.5731	6.1848	5.6198
6	0	5	1	4	360.000	94.354	94.354	89.391	108.271	90.902	112.707	109.072	49.5321	44.9471	54.4904
7	100	5	1	4	240.000	63.156	63.156	63.485	71.567	63.882	57.873	69.975	35.1678	31.2318	34.9351
8	0	3	2	1	346.667	61.199	61.199	58.110	67.013	55.716	75.653	67.443	35.3063	28.3450	44.9937
9	100	3	2	1	240.000	46.802	46.802	37.076	50.165	43.471	54.260	33.828	25.3462	21.7167	26.6786
10	0	5	2	2	493.333	83.411	83.411	83.666	72.676	93.761	99.552	98.174	40.5807	47.2781	40.6786
11	100	5	2	2	326.667	56.596	56.596	50.233	54.279	61.443	75.830	62.153	26.4134	24.8628	23.7682
12	0	1	2	3	486.667	112.073	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.7186
13	0	4	2	4	720.000	105.432	105.432	110.097	99.588	117.896	120.353	113.158	57.4055	46.2744	63.9738
14	100	4	2	4	50.000	14.370	14.370	.	16.168	11.170	15.001	10.147	6.4690	.	8.3201
15	0	2	3	1	353.333	49.411	49.411	71.366	47.499	58.322	55.001	61.416	33.8839	48.3832	26.6628
16	100	2	3	1	53.333	11.152	11.152	10.963	.	4.890	14.103	17.606	8.9344	5.9718	.
17	0	5	3	2	466.667	65.417	65.417	75.701	92.503	81.985	66.671	82.061	50.3942	47.6054	61.1527
18	100	5	3	2	226.667	41.758	41.758	41.334	64.317	40.403	48.065	33.737	28.9367	25.1884	37.5103
19	0	3	3	3	326.667	38.069	38.069	42.755	36.673	44.373	61.059	57.787	28.1699	26.7068	22.2571
20	100	3	3	3	153.333	22.376	22.376	30.194	26.311	22.504	22.498	19.736	15.4195	21.9753	15.1868
21	0	4	3	4	413.333	52.859	52.859	48.787	56.387	82.826	74.032	58.485	39.9909	33.4732	37.0680
22	100	4	3	4	73.333	16.448	16.448	26.277	19.046	11.269	26.893	20.738	12.2250	13.9966	17.6802
23	0	1	3	5	613.333	58.768	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.7753
24	0	5	4	1	393.333	30.534	30.534	32.046	43.658	39.279	.	42.938	22.3905	23.0379	24.7015

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
1	54.9197	50.4217	61.5127	-19.4591	-15.0220	-12.4676	-13.4210	0.2046	12	10	10	10	10
2	30.4500	27.4333	23.7216	-9.6156	8.7267	-1.5519	-14.7205	-18.9932	6	7	8	6	6
3	17.4683	30.3530	16.2124	-14.7897	4.5470	-5.3717	42.6728	-16.9581	9	6	4	4	4
4	69.8597	54.3982	62.1347	-20.9069	0.2002	2.6173	-16.4586	5.4239	13	12	9	11	11
5	12.6083	9.6107	10.0497	-24.0150	-30.9568	-11.2670	0.8067	-2.7211	1	1	4	3	3
6	48.5380	56.0187	56.9038	10.3031	-14.8640	6.5818	13.4425	1.8327	10	8	11	11	12
7	36.9896	41.0337	34.8805	-5.2088	-6.9495	2.9981	18.8953	-7.9590	14	13	8	6	4
8	36.7367	45.5062	29.1811	-3.2968	7.0717	16.5873	30.7352	-2.6910	12	7	10	11	13
9	33.2371	34.9100	20.0227	3.8801	8.3170	7.1451	15.8370	9.5952	12	13	5	4	3
10	42.9157	58.9327	40.4911	15.0362	3.9742	1.6026	34.0996	-12.9064	15	14	14	14	18
11	34.3995	48.9060	16.5336	-2.8521	-13.6740	-3.6477	31.3200	-4.2312	18	16	9	6	1
12	55.8726	65.8722	46.2110	-6.4905	-6.0013	2.2123	33.3220	-4.5402	14	15	15	15	14
13	59.6297	54.6622	44.2535	-18.9418	3.5445	3.4205	10.3592	-20.0818	15	16	14	13	16
14	5.6503	8.6296	.	.	13.3779	-4.0741	32.6134	.	0	1	1	2	0
15	28.1827	16.9082	19.4577	-3.9258	-6.0247	-5.7426	-83.8033	-43.1879	10	12	11	10	10
16	3.0106	6.6917	9.5554	-14.7958	.	-7.5893	-39.0336	-20.4647	3	0	1	2	2
17	45.1127	27.5815	38.8296	-18.4830	-8.5774	-4.3929	-59.1914	-41.4305	15	12	13	15	15
18	22.6247	17.6041	16.1601	-11.4851	-2.2154	-6.3143	-36.2077	-24.5387	6	9	8	6	5
19	26.0557	23.1712	27.7401	-2.6101	-6.2302	-5.2853	-53.5731	-14.7192	11	8	11	9	12
20	12.7756	8.6170	7.1836	-1.0136	-6.7886	-9.0051	-27.5912	-30.6835	4	7	3	5	3
21	50.6320	23.3808	24.2790	-5.4657	-3.3969	-9.3807	-58.3263	-34.3883	13	13	11	13	12
22	6.6793	6.7833	10.1910	-10.8635	4.2977	-10.6305	-44.3021	-22.7507	2	2	4	1	2
23	39.1268	38.3228	42.3492	-8.2177	-0.7664	-1.2834	-37.5903	-21.5748	19	19	18	19	19
24	17.3082	.	11.4556	-2.1645	-5.2472	-9.2087	.	-60.0919	11	11	11	0	13

Status=all

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
25	100	5	4	1	266.667	26.467	26.467	35.320	29.022	32.372	.	22.840	16.8889	20.1900	16.4202
26	0	3	4	2	346.667	21.693	21.693	26.133	26.261	25.300	.	31.121	17.6386	15.5433	19.1952
27	100	3	4	2	220.000	15.814	15.814	14.903	18.034	22.333	.	20.808	13.8306	12.8607	13.6786
28	0	4	4	3	673.333	36.864	36.864	42.744	47.800	57.980	.	65.044	28.5142	25.1428	29.1145
29	100	4	4	3	120.000	10.923	10.923	13.921	8.960	17.499	.	13.292	8.8511	8.5933	4.2607
30	0	2	4	4	473.333	31.241	31.241	41.695	40.189	47.249	.	54.768	24.0700	22.4321	20.0237
31	100	2	4	4	80.000	7.119	7.119	5.345	10.742	7.542	.	11.339	5.4700	3.2070	6.0067
32	0	1	4	5	746.667	36.248	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.3053

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
25	14.2450	.	9.0048	-3.0478	-11.1698	-10.4923	.	-46.0840	10	9	9	0	7
26	13.0712	.	9.4252	-5.4596	0.1657	-7.2824	.	-47.9223	12	13	9	0	6
27	12.2713	.	10.2513	-1.8254	-3.3002	-14.9181	.	-24.3959	6	7	7	0	11
28	26.5111	.	11.7215	-4.3131	-6.0696	-6.5088	.	-74.1188	20	23	22	0	22
29	7.5985	.	7.2429	-6.1410	-3.1250	-41.7486	.	-10.3563	4	1	3	0	3
30	23.4440	.	14.1297	-6.5652	-7.4991	-6.0873	.	-39.5599	16	14	15	0	12
31	4.9151	.	5.4987	-3.1621	-11.6602	-2.8750	.	-8.7054	1	3	2	0	4
32	41.9430	.	21.9215	-3.9670	-4.9354	-3.0909	.	-31.7609	23	23	22	0	23

chg

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```
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
if grd_tree<2 ; grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD1095 RAD0595 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 HRT97 SAP97 RAD1097 RAD0597 STMLN97 CRNHT97 CRNTP97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

TITLE "Status=0";
if stat92 ne 0 then csapba92=.;
if stat93 ne 0 then csapba93=.;
if stat94 ne 0 then csapba94=.;
if stat95 ne 0 then csapba95=.;
if stat97 ne 0 then csapba97=.;
```

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2

```
proc sort; by block plot grd_tree;
proc means noprint nway; var  ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
output out=mean mean=
  n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
```

```
libname save '.';
```

```
data save.meangrd; set mean;
```

```
if block=1 and plot=1 then treat=1;
```

```
if block=1 and plot=2 then treat=3;
```

```
if block=1 and plot=3 then treat=4;
```

```
if block=1 and plot=4 then treat=5;
```

```
if block=2 and plot=1 then treat=3;
```

```
if block=2 and plot=2 then treat=5;
```

```
if block=2 and plot=3 then treat=1;
```

```
if block=2 and plot=4 then treat=4;
```

```
if block=3 and plot=1 then treat=2;
```

```
if block=3 and plot=2 then treat=5;
```

```
if block=3 and plot=3 then treat=3;
```

```
if block=3 and plot=4 then treat=4;
```

```
if block=3 and plot=5 then treat=1;
```

```
if block=4 and plot=1 then treat=5;
```

```
if block=4 and plot=2 then treat=3;
```

```
if block=4 and plot=3 then treat=4;
```

```
if block=4 and plot=4 then treat=2;
```

```
if block=4 and plot=5 then treat=1;
```

```
t_trees = _freq_;
```

```
hec= .15 * .404686;
```

```
acre=.15;
```

```
if block=2 and plot=4 then hec= .10 * .404686;
```

```
if block=1 and plot=3 then hec= .10 * .404686;
```

```
if block=2 and plot=4 then acre= .10;
```

```
if block=1 and plot=3 then acre= .10;
```

```
qmd90=sqrt(ba90/.005454);
```

```
qmd91=sqrt(ba91/.005454);
```

```
qmd92=sqrt(ba92/.005454);
```

```
qmd93=sqrt(ba93/.005454);
```

```
qmd94=sqrt(ba94/.005454);
```

```
qmd95=sqrt(ba95/.005454);
```

```
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
```

```
t_ba91=t_trees*ba91/acre;
```

```
t_ba92=t_trees*ba92/acre;
```

```
t_ba93=t_trees*ba93/acre;
```

```
t_ba94=t_trees*ba94/acre;
```

```
t_ba95=t_trees*ba95/acre;
```

```
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
```

```
t_spba92=t_trees*sap_ba92/acre;
```

```
t_spba93=t_trees*sap_ba93/acre;
```

```
t_spba94=t_trees*sap_ba94/acre;
```

```
t_spba95=t_trees*sap_ba95/acre;
```

```
t_cnh97=t_trees*sap_ba97/acre;
```

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```
proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97  
n_csap92--n_csap97;
```

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1

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The SAS System

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NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

real time 0.20 seconds

cpu time 0.12 seconds

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1      options ls=132 ps=55;
2      data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
3      input block plot tag east north crown dbh90 rank grd_tree girdle;
4      if grd_tree<2 ; grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

real time 0.38 seconds

cpu time 0.15 seconds

```
5      proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

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NOTE: PROCEDURE SORT used:

real time	0.23 seconds
cpu time	0.06 seconds

```
6      data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
7      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
8      CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.

The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.32 seconds
cpu time	0.17 seconds

```
9      proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.24 seconds
cpu time	0.06 seconds

```
10     data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
11     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.21 seconds
cpu time	0.06 seconds

```
12     proc sort; by block plot tag;
```

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

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NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.03 seconds

```
13      data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
14      input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
15      sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
16      drop stat92x;
```

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time	0.18 seconds
cpu time	0.07 seconds

```
17      proc sort; by block plot tag;
```

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.02 seconds

```
18      data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
19      input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
20      sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
21      drop stat93x;
```

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 20:12 3 at 20:32 3 at 20:51 3 at 20:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time	0.18 seconds
-----------	--------------

cpu time 0.05 seconds

22 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds

cpu time 0.01 seconds

23 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;

24 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;

25 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.17 seconds

cpu time 0.04 seconds

26 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.13 seconds

cpu time 0.01 seconds

27 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;

28 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;

29 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

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8 at 29:12 11 at 29:32 10 at 29:51 8 at 29:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time 0.19 seconds
cpu time 0.06 seconds

30 proc sort; by block plot tag;

31

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds
cpu time 0.02 seconds

32 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

33 if tag;

34 ba90 = (dbh90**2)* .005454;

35 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

36 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

37 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

38

39 woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

40 woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

41 woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

42 woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

43 woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

44 woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

45

46 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

47 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

48 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

49 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

50 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

51

52 TITLE "Status=0";

53 if stat92 ne 0 then csapba92=.;

54 if stat93 ne 0 then csapba93=.;

55 if stat94 ne 0 then csapba94=.;

56 if stat95 ne 0 then csapba95=.;

57 if stat97 ne 0 then csapba97=.;

58

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15
RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25
CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016
HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.
WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

```

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
CSAPBA97=. _ERROR_=1 _N_=443
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
CRNTP95=. STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25
RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455
NOTE: Missing values were generated as a result of performing an operation on missing values.
  Each place is given by: (Number of times) at (Line):(Column).
    1179 at 35:42    1179 at 35:46    1195 at 36:14    1195 at 36:18    1218 at 36:42    1218 at 36:46    1325 at 37:14
    1325 at 37:18    1216 at 37:42    1216 at 37:46    1179 at 40:47    1179 at 40:54    1179 at 40:58    1179 at 40:84
    1195 at 41:47    1195 at 41:54    1195 at 41:58    1195 at 41:84    1218 at 42:47    1218 at 42:54    1218 at 42:58
    1218 at 42:84    1324 at 43:47    1324 at 43:54    1324 at 43:58    1324 at 43:84    1224 at 44:47    1224 at 44:54
    1224 at 44:58    1224 at 44:84    1179 at 46:19    1179 at 46:29    1183 at 46:38    1195 at 47:19    1195 at 47:29
    1195 at 47:38    1218 at 48:19    1218 at 48:29    1218 at 48:38    1324 at 49:19    1324 at 49:29    1324 at 49:38
    1224 at 50:19    1224 at 50:29    1224 at 50:38
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to
missing values.
  Each place is given by: (Number of times) at (Line):(Column).
    4 at 46:29
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
NOTE: DATA statement used:
      real time      2.11 seconds
      cpu time       1.10 seconds

```

59 proc sort; by block plot grd_tree;

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

NOTE: PROCEDURE SORT used:

real time	0.76 seconds
cpu time	0.17 seconds

```
60      proc means noprint nway; var  ba90--ba97 dbh91--crnht97
61      sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
62      output out=mean mean=
63      n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
64
65      libname save '.';
```

NOTE: Libref SAVE was successfully assigned as follows:

Engine: V612
Physical Name: /a/zumbrunn/jobs/jacobi/opt

NOTE: The data set WORK.MEAN has 32 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.33 seconds
cpu time	0.16 seconds

```
66      data save.meangrd; set mean;
67      if block=1 and plot=1 then treat=1;
68      if block=1 and plot=2 then treat=3;
69      if block=1 and plot=3 then treat=4;
70      if block=1 and plot=4 then treat=5;
71      if block=2 and plot=1 then treat=3;
72      if block=2 and plot=2 then treat=5;
73      if block=2 and plot=3 then treat=1;
74      if block=2 and plot=4 then treat=4;
75      if block=3 and plot=1 then treat=2;
76      if block=3 and plot=2 then treat=5;
77      if block=3 and plot=3 then treat=3;
78      if block=3 and plot=4 then treat=4;
79      if block=3 and plot=5 then treat=1;
80      if block=4 and plot=1 then treat=5;
81      if block=4 and plot=2 then treat=3;
82      if block=4 and plot=3 then treat=4;
83      if block=4 and plot=4 then treat=2;
84      if block=4 and plot=5 then treat=1;
85      t_trees = _freq_;
86      hec= .15 * .404686;
87      acre=.15;
88      if block=2 and plot=4 then hec= .10 * .404686;
89      if block=1 and plot=3 then hec= .10 * .404686;
90      if block=2 and plot=4 then acre= .10;
91      if block=1 and plot=3 then acre= .10;
92
93      qmd90=sqrt(ba90/.005454);
94      qmd91=sqrt(ba91/.005454);
95      qmd92=sqrt(ba92/.005454);
96      qmd93=sqrt(ba93/.005454);
97      qmd94=sqrt(ba94/.005454);
```

```

98      qmd95=sqrt(ba95/.005454);
99      qmd97=sqrt(ba97/.005454);
100
101      t_den= t_trees/acre;
102
103      t_ba90=t_trees*ba90/acre;
104      t_ba91=t_trees*ba91/acre;
105      t_ba92=t_trees*ba92/acre;
106      t_ba93=t_trees*ba93/acre;
107      t_ba94=t_trees*ba94/acre;
108      t_ba95=t_trees*ba95/acre;
109      t_ba97=t_trees*ba97/acre;
110
111      t_spba91=t_trees*sap_ba91/acre;
112      t_spba92=t_trees*sap_ba92/acre;
113      t_spba93=t_trees*sap_ba93/acre;
114      t_spba94=t_trees*sap_ba94/acre;
115      t_spba95=t_trees*sap_ba95/acre;
116      t_spba97=t_trees*sap_ba97/acre;
117

```

NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1 at 95:7 1 at 95:16 1 at 96:7 1 at 96:16 9 at 98:7 9 at 98:16 1 at 105:15 1 at 105:20 1 at 106:15
1 at 106:20 9 at 108:15 9 at 108:20 1 at 112:17 1 at 112:26 1 at 113:17 1 at 113:26 9 at 115:17 9 at 115:26
1 at 116:17 1 at 116:26

NOTE: The data set SAVE.MEANGRD has 32 observations and 106 variables.

NOTE: DATA statement used:
real time 1.64 seconds
cpu time 0.12 seconds

```

118      proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97
119      n_csap92--n_csap97;
NOTE: The PROCEDURE PRINT printed pages 1-2.
NOTE: PROCEDURE PRINT used:
real time            0.09 seconds
cpu time             0.04 seconds

```

NOTE: The SAS System used:
real time 8.09 seconds
cpu time 2.56 seconds

chg.lst

Mon Oct 26 07:35:00 1998

1

Status=0

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
1	0	1	1	1	346.667	97.869	97.869	94.943	109.403	97.709	116.671	106.769	60.7565	50.1167	51.0948
2	0	3	1	2	220.000	59.580	59.580	53.439	68.037	66.385	72.769	64.034	28.6542	18.6721	38.4013
3	100	3	1	2	146.667	41.734	41.734	41.257	44.825	39.930	39.514	37.482	20.6565	16.8774	25.6761
4	0	4	1	3	550.000	111.149	111.149	118.571	106.102	131.397	116.181	121.030	61.0433	56.4636	58.2617
5	100	4	1	3	70.000	19.831	19.831	15.153	14.676	19.481	17.050	17.032	12.5731	6.1848	5.6198
6	0	5	1	4	360.000	94.354	94.354	89.391	108.271	90.902	112.707	109.072	49.5321	44.9471	54.4904
7	100	5	1	4	240.000	63.156	63.156	63.485	71.567	63.882	57.873	69.975	35.1678	31.2318	34.9351
8	0	3	2	1	346.667	61.199	61.199	58.110	67.013	55.716	75.653	67.443	35.3063	28.3450	44.9937
9	100	3	2	1	240.000	46.802	46.802	37.076	50.165	43.471	54.260	33.828	25.3462	21.7167	26.6786
10	0	5	2	2	493.333	83.411	83.411	83.666	72.676	93.761	99.552	98.174	40.5807	47.2781	40.6786
11	100	5	2	2	326.667	56.596	56.596	50.233	54.279	61.443	75.830	62.153	26.4134	24.8628	23.7682
12	0	1	2	3	486.667	112.073	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.7186
13	0	4	2	4	720.000	105.432	105.432	110.097	99.588	117.896	120.353	113.158	57.4055	46.2744	63.9738
14	100	4	2	4	50.000	14.370	14.370	.	16.168	11.170	15.001	10.147	6.4690	.	8.3201
15	0	2	3	1	353.333	49.411	49.411	71.366	47.499	58.322	55.001	61.416	33.8839	48.3832	26.6628
16	100	2	3	1	53.333	11.152	11.152	10.963	.	4.890	14.103	17.606	8.9344	5.9718	.
17	0	5	3	2	466.667	65.417	65.417	75.701	92.503	81.985	66.671	82.061	50.3942	47.6054	61.1527
18	100	5	3	2	226.667	41.758	41.758	41.334	64.317	40.403	48.065	33.737	28.9367	25.1884	37.5103
19	0	3	3	3	326.667	38.069	38.069	42.755	36.673	44.373	61.059	57.787	28.1699	26.7068	22.2571
20	100	3	3	3	153.333	22.376	22.376	30.194	26.311	22.504	22.498	19.736	15.4195	21.9753	15.1868
21	0	4	3	4	413.333	52.859	52.859	48.787	56.387	82.826	74.032	58.485	39.9909	33.4732	37.0680
22	100	4	3	4	73.333	16.448	16.448	26.277	19.046	11.269	26.893	20.738	12.2250	13.9966	17.6802
23	0	1	3	5	613.333	58.768	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.7753
24	0	5	4	1	393.333	30.534	30.534	32.046	43.658	39.279	.	42.938	22.3905	23.0379	24.7015

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
1	54.9197	50.4217	61.5127	-15.1118	-15.0220	-12.4676	-13.4210	0.2046	11	10	10	10	10
2	30.4500	27.4333	23.7216	-9.6156	8.7267	-1.5519	-14.7205	-18.9932	6	7	8	6	6
3	17.4683	30.3530	16.2124	-10.7164	2.6139	-17.4365	42.6728	-16.9581	5	3	2	4	4
4	69.8597	54.3982	62.1347	-20.9069	0.2002	2.6173	-16.4586	5.4239	13	12	9	11	11
5	12.6083	9.6107	10.0497	.	.	1.6284	38.0198	.	0	0	3	1	0
6	48.5380	56.0187	56.9038	10.3031	-14.8640	6.5818	13.4425	1.8327	10	8	11	11	12
7	36.9896	41.0337	34.8805	-0.0052	-2.5676	5.5066	22.6744	-7.6358	6	8	6	5	3
8	36.7367	45.5062	29.1811	-3.2968	7.0717	16.5873	30.7352	-2.6910	12	7	10	11	13
9	33.2371	34.9100	20.0227	-20.0918	-3.0427	7.1451	15.8370	9.5952	4	8	5	4	3
10	42.9157	58.9327	40.4911	15.0362	3.9742	1.6026	34.0996	-12.9064	15	14	14	14	18
11	34.3995	48.9060	16.5336	-10.1352	-12.0249	-4.7512	40.9205	-4.2312	6	5	5	4	1
12	55.8726	65.8722	46.2110	-6.4905	-6.0013	2.2123	33.3220	-4.5402	14	15	15	15	14
13	59.6297	54.6622	44.2535	-18.9418	3.5445	3.4205	10.3592	-20.0818	15	16	14	13	16
14	5.6503	8.6296	.	.	.	-4.0741	32.6134	.	0	0	1	2	0
15	28.1827	16.9082	19.4577	-3.9258	-6.0247	-5.7426	-83.8033	-43.1879	10	12	11	10	10
16	3.0106	6.6917	9.5554	-14.7958	.	-7.5893	-39.0336	-20.4647	3	0	1	2	2
17	45.1127	27.5815	38.8296	-18.4830	-8.5774	-4.3929	-59.1914	-41.4305	15	12	13	15	15
18	22.6247	17.6041	16.1601	-11.4851	-2.2154	-6.3143	-36.2077	-24.5387	6	9	8	6	5
19	26.0557	23.1712	27.7401	-2.6101	-6.2302	-5.2853	-53.5731	-14.7192	11	8	11	9	12
20	12.7756	8.6170	7.1836	-1.0136	-6.7886	-9.0051	-31.9890	-30.6835	4	7	3	4	3
21	50.6320	23.3808	24.2790	-5.4657	-3.3969	-9.3807	-58.3263	-34.3883	13	13	11	13	12
22	6.6793	6.7833	10.1910	-10.8635	4.2977	-10.6305	-44.3021	-22.7507	2	2	4	1	2
23	39.1268	38.3228	42.3492	-8.2177	-0.7664	-1.2834	-37.5903	-21.5748	19	19	18	19	19
24	17.3082	.	11.4556	-2.1645	-5.2472	-9.2087	.	-60.0919	11	11	11	0	13

Status=0

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
25	100	5	4	1	266.667	26.467	26.467	35.320	29.022	32.372	.	22.840	16.8889	20.1900	16.4202
26	0	3	4	2	346.667	21.693	21.693	26.133	26.261	25.300	.	31.121	17.6386	15.5433	19.1952
27	100	3	4	2	220.000	15.814	15.814	14.903	18.034	22.333	.	20.808	13.8306	12.8607	13.6786
28	0	4	4	3	673.333	36.864	36.864	42.744	47.800	57.980	.	65.044	28.5142	25.1428	29.1145
29	100	4	4	3	120.000	10.923	10.923	13.921	8.960	17.499	.	13.292	8.8511	8.5933	4.2607
30	0	2	4	4	473.333	31.241	31.241	41.695	40.189	47.249	.	54.768	24.0700	22.4321	20.0237
31	100	2	4	4	80.000	7.119	7.119	5.345	10.742	7.542	.	11.339	5.4700	3.2070	6.0067
32	0	1	4	5	746.667	36.248	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.3053

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
25	14.2450	.	9.0048	-4.0702	-11.1698	-10.4923	.	-49.8177	9	9	9	0	6
26	13.0712	.	9.4252	-5.4596	0.1657	-7.2824	.	-47.9223	12	13	9	0	6
27	12.2713	.	10.2513	-2.7620	-3.3180	-14.9181	.	-24.3959	5	4	7	0	11
28	26.5111	.	11.7215	-4.3131	-6.0696	-6.5088	.	-74.1188	20	23	22	0	22
29	7.5985	.	7.2429	-6.1410	-3.1250	-41.7486	.	-10.3563	4	1	3	0	3
30	23.4440	.	14.1297	-6.5652	-7.4991	-6.0873	.	-39.5599	16	14	15	0	12
31	4.9151	.	5.4987	-3.1621	-11.6602	-2.8750	.	-8.7054	1	3	2	0	4
32	41.9430	.	21.9215	-3.9670	-4.9354	-3.0909	.	-31.7609	23	23	22	0	23

```
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
if grd_tree<2 ; grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
proc sort; by block plot tag;
```

```
data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;
```

```
woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;
```

```
csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;
```

```
TITLE "Status=1";
if stat92 ne 1 then csapba92=.;
if stat93 ne 1 then csapba93=.;
if stat94 ne 1 then csapba94=.;
if stat95 ne 1 then csapba95=.;
if stat97 ne 1 then csapba97=.;
```

```
proc sort; by block plot grd_tree;
proc means noprint nway; var  ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
```

```
libname save '.';
data save.meangrd; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre= .10;
if block=1 and plot=3 then acre= .10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```

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```
proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97  
n_csap92--n_csap97;
```

```
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```

1 The SAS System

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NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH, IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

```
real time      0.22 seconds
cpu time       0.10 seconds
```

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1      options ls=132 ps=55;
2      data t90; infile '90.dat' firstobs=2 delimiter=',' missover;
3      input block plot tag east north crown dbh90 rank grd_tree girdle;
4      if grd_tree<2 ; grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

```
File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,  
Owner Name=zumbrunn,Group Name=ACD0003,  
Access Permission=rw-----,  
File Size (bytes)=46889
```

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

```
real time      0.38 seconds
cpu time       0.17 seconds
```

```
5      proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

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NOTE: PROCEDURE SORT used:

real time	0.23 seconds
cpu time	0.06 seconds

```
6      data t91; infile '91.dat' firstobs=2 delimiter=',' missover;
7      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
8      CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.

The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.33 seconds
cpu time	0.17 seconds

```
9      proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.23 seconds
cpu time	0.08 seconds

```
10     data t92; infile '92.dat' firstobs=2 delimiter=',' missover;
11     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.18 seconds
cpu time	0.06 seconds

```
12     proc sort; by block plot tag;
```

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

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NOTE: PROCEDURE SORT used:

real time	0.14 seconds
cpu time	0.02 seconds

```
13      data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
14      input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
15      sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
16      drop stat92x;
```

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time	0.18 seconds
cpu time	0.07 seconds

```
17      proc sort; by block plot tag;
```

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.04 seconds

```
18      data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
19      input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
20      sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
21      drop stat93x;
```

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 20:12 3 at 20:32 3 at 20:51 3 at 20:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time	0.17 seconds
-----------	--------------

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cpu time 0.07 seconds

22 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds
cpu time 0.02 seconds

23 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
24 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
25 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.16 seconds
cpu time 0.04 seconds

26 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.13 seconds
cpu time 0.02 seconds

27 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
28 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
29 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

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8 at 29:12 11 at 29:32 10 at 29:51 8 at 29:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time 0.17 seconds

cpu time 0.07 seconds

30 proc sort; by block plot tag;

31

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds

cpu time 0.04 seconds

32 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

33 if tag;

34 ba90 = (dbh90**2)* .005454;

35 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

36 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

37 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

38

39 woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

40 woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

41 woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

42 woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

43 woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

44 woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

45

46 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

47 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

48 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

49 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

50 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

51

52 TITLE "Status=1";

53 if stat92 ne 1 then csapba92=.;

54 if stat93 ne 1 then csapba93=.;

55 if stat94 ne 1 then csapba94=.;

56 if stat95 ne 1 then csapba95=.;

57 if stat97 ne 1 then csapba97=.;

58

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15
RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25
CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016
HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.
WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
 RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
 CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
 RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
 STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
 LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
 HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
 HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
 CSAPBA97=. _ERROR_=1 _N_=443

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
 RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
 CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
 SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
 CRNTP95=. STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
 LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
 HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
 WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
 CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25
 RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
 CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
 RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
 STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
 LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
 HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
 WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
 CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

1179 at 35:42	1179 at 35:46	1195 at 36:14	1195 at 36:18	1218 at 36:42	1218 at 36:46	1325 at 37:14
1325 at 37:18	1216 at 37:42	1216 at 37:46	1179 at 40:47	1179 at 40:54	1179 at 40:58	1179 at 40:84
1195 at 41:47	1195 at 41:54	1195 at 41:58	1195 at 41:84	1218 at 42:47	1218 at 42:54	1218 at 42:58
1218 at 42:84	1324 at 43:47	1324 at 43:54	1324 at 43:58	1324 at 43:84	1224 at 44:47	1224 at 44:54
1224 at 44:58	1224 at 44:84	1179 at 46:19	1179 at 46:29	1183 at 46:38	1195 at 47:19	1195 at 47:29
1195 at 47:38	1218 at 48:19	1218 at 48:29	1218 at 48:38	1324 at 49:19	1324 at 49:29	1324 at 49:38
1224 at 50:19	1224 at 50:29	1224 at 50:38				

NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to missing values.

Each place is given by: (Number of times) at (Line):(Column).

4 at 46:29

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

NOTE: DATA statement used:

real time	2.10 seconds
cpu time	1.11 seconds

59 proc sort; by block plot grd_tree;

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

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NOTE: PROCEDURE SORT used:

real time	0.71 seconds
cpu time	0.19 seconds

```
60      proc means noprint nway; var  ba90--ba97 dbh91--crnht97
61          sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
62          output out=mean mean=
63              n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
64
65      libname save '.';
```

NOTE: Libref SAVE was successfully assigned as follows:

Engine: V612
Physical Name: /a/zumbrunn/jobs/jacobi/opt

NOTE: The data set WORK.MEAN has 32 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.27 seconds
cpu time	0.13 seconds

```
66      data save.meangrd; set mean;
67      if block=1 and plot=1 then treat=1;
68      if block=1 and plot=2 then treat=3;
69      if block=1 and plot=3 then treat=4;
70      if block=1 and plot=4 then treat=5;
71      if block=2 and plot=1 then treat=3;
72      if block=2 and plot=2 then treat=5;
73      if block=2 and plot=3 then treat=1;
74      if block=2 and plot=4 then treat=4;
75      if block=3 and plot=1 then treat=2;
76      if block=3 and plot=2 then treat=5;
77      if block=3 and plot=3 then treat=3;
78      if block=3 and plot=4 then treat=4;
79      if block=3 and plot=5 then treat=1;
80      if block=4 and plot=1 then treat=5;
81      if block=4 and plot=2 then treat=3;
82      if block=4 and plot=3 then treat=4;
83      if block=4 and plot=4 then treat=2;
84      if block=4 and plot=5 then treat=1;
85      t_trees = _freq_;
86      hec= .15 * .404686;
87      acre=.15;
88      if block=2 and plot=4 then hec= .10 * .404686;
89      if block=1 and plot=3 then hec= .10 * .404686;
90      if block=2 and plot=4 then acre= .10;
91      if block=1 and plot=3 then acre= .10;
92
93      qmd90=sqrt(ba90/.005454);
94      qmd91=sqrt(ba91/.005454);
95      qmd92=sqrt(ba92/.005454);
96      qmd93=sqrt(ba93/.005454);
97      qmd94=sqrt(ba94/.005454);
```

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```
98      qmd95=sqrt(ba95/.005454);
99      qmd97=sqrt(ba97/.005454);
100
101      t_den= t_trees/acre;
102
103      t_ba90=t_trees*ba90/acre;
104      t_ba91=t_trees*ba91/acre;
105      t_ba92=t_trees*ba92/acre;
106      t_ba93=t_trees*ba93/acre;
107      t_ba94=t_trees*ba94/acre;
108      t_ba95=t_trees*ba95/acre;
109      t_ba97=t_trees*ba97/acre;
110
111      t_spba91=t_trees*sap_ba91/acre;
112      t_spba92=t_trees*sap_ba92/acre;
113      t_spba93=t_trees*sap_ba93/acre;
114      t_spba94=t_trees*sap_ba94/acre;
115      t_spba95=t_trees*sap_ba95/acre;
116      t_spba97=t_trees*sap_ba97/acre;
117
```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

1 at 95:7	1 at 95:16	1 at 96:7	1 at 96:16	9 at 98:7	9 at 98:16	1 at 105:15	1 at 105:20	1 at 106:15
1 at 106:20	9 at 108:15	9 at 108:20	1 at 112:17	1 at 112:26	1 at 113:17	1 at 113:26	9 at 115:17	9 at 115:26
1 at 116:17	1 at 116:26							

NOTE: The data set SAVE.MEANGRD has 32 observations and 106 variables.

NOTE: DATA statement used:

real time	1.57 seconds
cpu time	0.11 seconds

```
118      proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97
119      n_csap92--n_csap97;
```

NOTE: The PROCEDURE PRINT printed pages 1-2.

NOTE: PROCEDURE PRINT used:

real time	0.12 seconds
cpu time	0.04 seconds

NOTE: The SAS System used:

real time	7.85 seconds
cpu time	2.63 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

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Status=1

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
1	0	1	1	1	346.667	97.869	97.869	94.943	109.403	97.709	116.671	106.769	60.7565	50.1167	51.0948
2	0	3	1	2	220.000	59.580	59.580	53.439	68.037	66.385	72.769	64.034	28.6542	18.6721	38.4013
3	100	3	1	2	146.667	41.734	41.734	41.257	44.825	39.930	39.514	37.482	20.6565	16.8774	25.6761
4	0	4	1	3	550.000	111.149	111.149	118.571	106.102	131.397	116.181	121.030	61.0433	56.4636	58.2617
5	100	4	1	3	70.000	19.831	19.831	15.153	14.676	19.481	17.050	17.032	12.5731	6.1848	5.6198
6	0	5	1	4	360.000	94.354	94.354	89.391	108.271	90.902	112.707	109.072	49.5321	44.9471	54.4904
7	100	5	1	4	240.000	63.156	63.156	63.485	71.567	63.882	57.873	69.975	35.1678	31.2318	34.9351
8	0	3	2	1	346.667	61.199	61.199	58.110	67.013	55.716	75.653	67.443	35.3063	28.3450	44.9937
9	100	3	2	1	240.000	46.802	46.802	37.076	50.165	43.471	54.260	33.828	25.3462	21.7167	26.6786
10	0	5	2	2	493.333	83.411	83.411	83.666	72.676	93.761	99.552	98.174	40.5807	47.2781	40.6786
11	100	5	2	2	326.667	56.596	56.596	50.233	54.279	61.443	75.830	62.153	26.4134	24.8628	23.7682
12	0	1	2	3	486.667	112.073	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.7186
13	0	4	2	4	720.000	105.432	105.432	110.097	99.588	117.896	120.353	113.158	57.4055	46.2744	63.9738
14	100	4	2	4	50.000	14.370	14.370	.	16.168	11.170	15.001	10.147	6.4690	.	8.3201
15	0	2	3	1	353.333	49.411	49.411	71.366	47.499	58.322	55.001	61.416	33.8839	48.3832	26.6628
16	100	2	3	1	53.333	11.152	11.152	10.963	.	4.890	14.103	17.606	8.9344	5.9718	.
17	0	5	3	2	466.667	65.417	65.417	75.701	92.503	81.985	66.671	82.061	50.3942	47.6054	61.1527
18	100	5	3	2	226.667	41.758	41.758	41.334	64.317	40.403	48.065	33.737	28.9367	25.1884	37.5103
19	0	3	3	3	326.667	38.069	38.069	42.755	36.673	44.373	61.059	57.787	28.1699	26.7068	22.2571
20	100	3	3	3	153.333	22.376	22.376	30.194	26.311	22.504	22.498	19.736	15.4195	21.9753	15.1868
21	0	4	3	4	413.333	52.859	52.859	48.787	56.387	82.826	74.032	58.485	39.9909	33.4732	37.0680
22	100	4	3	4	73.333	16.448	16.448	26.277	19.046	11.269	26.893	20.738	12.2250	13.9966	17.6802
23	0	1	3	5	613.333	58.768	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.7753
24	0	5	4	1	393.333	30.534	30.534	32.046	43.658	39.279	.	42.938	22.3905	23.0379	24.7015

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
1	54.9197	50.4217	61.5127	.	.	.	.	.	0	0	0	0	0
2	30.4500	27.4333	23.7216	.	.	.	.	.	0	0	0	0	0
3	17.4683	30.3530	16.2124	-0.0568	.	.	.	.	2	0	0	0	0
4	69.8597	54.3982	62.1347	.	.	.	.	.	0	0	0	0	0
5	12.6083	9.6107	10.0497	-24.0150	-30.9568	-49.9531	-8.3021	-2.7211	1	1	1	1	3
6	48.5380	56.0187	56.9038	.	.	.	.	.	0	0	0	0	0
7	36.9896	41.0337	34.8805	17.4209	-67.2269	.	.	-8.9286	2	1	0	0	1
8	36.7367	45.5062	29.1811	.	.	.	.	.	0	0	0	0	0
9	33.2371	34.9100	20.0227	-26.8817	.	.	.	.	1	0	0	0	0
10	42.9157	58.9327	40.4911	.	.	.	.	.	0	0	0	0	0
11	34.3995	48.9060	16.5336	-55.6545	.	.	28.0505	.	2	0	0	1	0
12	55.8726	65.8722	46.2110	.	.	.	.	.	0	0	0	0	0
13	59.6297	54.6622	44.2535	.	.	.	.	.	0	0	0	0	0
14	5.6503	8.6296	.	.	.	.	.	.	0	0	0	0	0
15	28.1827	16.9082	19.4577	.	.	.	.	.	0	0	0	0	0
16	3.0106	6.6917	9.5554	.	.	.	.	.	0	0	0	0	0
17	45.1127	27.5815	38.8296	.	.	.	.	.	0	0	0	0	0
18	22.6247	17.6041	16.1601	.	.	.	.	.	0	0	0	0	0
19	26.0557	23.1712	27.7401	.	.	.	.	.	0	0	0	0	0
20	12.7756	8.6170	7.1836	.	.	.	-10.0000	.	0	0	0	1	0
21	50.6320	23.3808	24.2790	.	.	.	.	.	0	0	0	0	0
22	6.6793	6.7833	10.1910	0	0	0	0	0
23	39.1268	38.3228	42.3492	0	0	0	0	0
24	17.3082	.	11.4556	0	0	0	0	0

Status=1

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
25	100	5	4	1	266.667	26.467	26.467	35.320	29.022	32.372	.	22.840	16.8889	20.1900	16.4202
26	0	3	4	2	346.667	21.693	21.693	26.133	26.261	25.300	.	31.121	17.6386	15.5433	19.1952
27	100	3	4	2	220.000	15.814	15.814	14.903	18.034	22.333	.	20.808	13.8306	12.8607	13.6786
28	0	4	4	3	673.333	36.864	36.864	42.744	47.800	57.980	.	65.044	28.5142	25.1428	29.1145
29	100	4	4	3	120.000	10.923	10.923	13.921	8.960	17.499	.	13.292	8.8511	8.5933	4.2607
30	0	2	4	4	473.333	31.241	31.241	41.695	40.189	47.249	.	54.768	24.0700	22.4321	20.0237
31	100	2	4	4	80.000	7.119	7.119	5.345	10.742	7.542	.	11.339	5.4700	3.2070	6.0067
32	0	1	4	5	746.667	36.248	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.3053

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
25	14.2450	.	9.0048	.	.	.	.	-23.6818	0	0	0	0	1
26	13.0712	.	9.4252	.	.	.	.	.	0	0	0	0	0
27	12.2713	.	10.2513	2.8571	-3.2764	.	.	.	1	3	0	0	0
28	26.5111	.	11.7215	.	.	.	.	.	0	0	0	0	0
29	7.5985	.	7.2429	.	.	.	.	.	0	0	0	0	0
30	23.4440	.	14.1297	.	.	.	.	.	0	0	0	0	0
31	4.9151	.	5.4987	.	.	.	.	.	0	0	0	0	0
32	41.9430	.	21.9215	.	.	.	.	.	0	0	0	0	0

```

options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
if grd_tree<2 ; grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

TITLE "Status=2";
if stat92 ne 2 then csapba92=.;
if stat93 ne 2 then csapba93=.;
if stat94 ne 2 then csapba94=.;
if stat95 ne 2 then csapba95=.;
if stat97 ne 2 then csapba97=.;

```

chg

Thu Oct 15 08:15:18 1998

2

```
proc sort; by block plot grd_tree;
proc means noprint nway; var ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
output out=mean mean=
  n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
```

```
libname save '.';
data save.meangrd; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre= .10;
if block=1 and plot=3 then acre= .10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```


chg

Thu Oct 15 08:15:18 1998

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```
proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97  
n_csap92--n_csap97;
```

chg.log Mon Oct 26 07:34:03 1998 1

1 The SAS System 07:33 Monday, October 26, 1998

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.12 TS045
 Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:
 real time 0.20 seconds
 cpu time 0.11 seconds

NOTE: DM statements are only valid in DMS mode.
NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1            options ls=132 ps=55;  
2            data t90; infile '90.dat' firstobs=2 delimiter=',' missover;  
3            input block plot tag east north crown dbh90 rank grd_tree girdle;  
4            if grd_tree<2 ; grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:
 File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,
 Owner Name=zumbrunn,Group Name=ACD0003,
 Access Permission=rw-----,
 File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.
 The minimum record length was 20.
 The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:
 real time 0.36 seconds
 cpu time 0.16 seconds

```
5            proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

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NOTE: PROCEDURE SORT used:

real time	0.24 seconds
cpu time	0.06 seconds

```
6      data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
7      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
8      CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.
The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.31 seconds
cpu time	0.15 seconds

```
9      proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.22 seconds
cpu time	0.07 seconds

```
10     data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
11     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.
The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.19 seconds
cpu time	0.07 seconds

```
12     proc sort; by block plot tag;
```

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

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NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.02 seconds

```
13      data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
14      input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
15      sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
16      drop stat92x;
```

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time	0.21 seconds
cpu time	0.07 seconds

```
17      proc sort; by block plot tag;
```

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.02 seconds

```
18      data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
19      input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
20      sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
21      drop stat93x;
```

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 20:12 3 at 20:32 3 at 20:51 3 at 20:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time	0.18 seconds
-----------	--------------

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cpu time 0.05 seconds

22 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.13 seconds

cpu time 0.04 seconds

23 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;

24 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;

25 sap95=sap95/20; rad1095=rad1095/20;rad0595=rad0595/20; hrt95=hrt95/20;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.16 seconds

cpu time 0.04 seconds

26 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.13 seconds

cpu time 0.03 seconds

27 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;

28 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;

29 sap97=sap97/20; rad1097=rad1097/20;rad0597=rad0597/20; hrt97=hrt97/20;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 29:12 11 at 29:32 10 at 29:51 8 at 29:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time 0.19 seconds

cpu time 0.07 seconds

30 proc sort; by block plot tag;

31

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds

cpu time 0.02 seconds

32 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

33 if tag;

34 ba90 = (dbh90**2)* .005454;

35 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

36 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

37 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

38

39 woda91=((hrt91+sap91)*2)**2 * .005454;hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

40 woda92=((hrt91+sap91)*2)**2 * .005454;hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

41 woda93=((hrt91+sap91)*2)**2 * .005454;hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

42 woda94=((hrt91+sap91)*2)**2 * .005454;hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

43 woda95=((hrt91+sap91)*2)**2 * .005454;hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

44 woda97=((hrt91+sap91)*2)**2 * .005454;hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

45

46 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

47 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

48 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

49 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

50 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

51

52 TITLE "Status=2";

53 if stat92 ne 2 then csapba92=.;

54 if stat93 ne 2 then csapba93=.;

55 if stat94 ne 2 then csapba94=.;

56 if stat95 ne 2 then csapba95=.;

57 if stat97 ne 2 then csapba97=.;

58

NOTE: Division by zero detected at line 46 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15

RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25

CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.

RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.

STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0

LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016

HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.

WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

```

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
CSAPBA97=. _ERROR_=1 _N_=443
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
CRNTP95=. STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454
NOTE: Division by zero detected at line 46 column 29.
BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25
RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455
NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1179 at 35:42 1179 at 35:46 1195 at 36:14 1195 at 36:18 1218 at 36:42 1218 at 36:46 1325 at 37:14
1325 at 37:18 1216 at 37:42 1216 at 37:46 1179 at 40:47 1179 at 40:54 1179 at 40:58 1179 at 40:84
1195 at 41:47 1195 at 41:54 1195 at 41:58 1195 at 41:84 1218 at 42:47 1218 at 42:54 1218 at 42:58
1218 at 42:84 1324 at 43:47 1324 at 43:54 1324 at 43:58 1324 at 43:84 1224 at 44:47 1224 at 44:54
1224 at 44:58 1224 at 44:84 1179 at 46:19 1179 at 46:29 1183 at 46:38 1195 at 47:19 1195 at 47:29
1195 at 47:38 1218 at 48:19 1218 at 48:29 1218 at 48:38 1324 at 49:19 1324 at 49:29 1324 at 49:38
1224 at 50:19 1224 at 50:29 1224 at 50:38
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to
missing values.
Each place is given by: (Number of times) at (Line):(Column).
4 at 46:29
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
NOTE: DATA statement used:
real time 1.96 seconds
cpu time 1.09 seconds

```

```
59 proc sort; by block plot grd_tree;
```

```
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
```

NOTE: PROCEDURE SORT used:

real time	0.71 seconds
cpu time	0.19 seconds

```
60      proc means noprint nway; var  ba90--ba97 dbh91--crnht97
61      sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
62      output out=mean mean=
63      n(csapba92--csapba97)=n_csap92-n_csap95 n_csap97; by block plot grd_tree;
64
65      libname save '.';
```

NOTE: Libref SAVE was successfully assigned as follows:

Engine: V612
Physical Name: /a/zumbrunn/jobs/jacobi/opt

NOTE: The data set WORK.MEAN has 32 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.32 seconds
cpu time	0.12 seconds

```
66      data save.meangrd; set mean;
67      if block=1 and plot=1 then treat=1;
68      if block=1 and plot=2 then treat=3;
69      if block=1 and plot=3 then treat=4;
70      if block=1 and plot=4 then treat=5;
71      if block=2 and plot=1 then treat=3;
72      if block=2 and plot=2 then treat=5;
73      if block=2 and plot=3 then treat=1;
74      if block=2 and plot=4 then treat=4;
75      if block=3 and plot=1 then treat=2;
76      if block=3 and plot=2 then treat=5;
77      if block=3 and plot=3 then treat=3;
78      if block=3 and plot=4 then treat=4;
79      if block=3 and plot=5 then treat=1;
80      if block=4 and plot=1 then treat=5;
81      if block=4 and plot=2 then treat=3;
82      if block=4 and plot=3 then treat=4;
83      if block=4 and plot=4 then treat=2;
84      if block=4 and plot=5 then treat=1;
85      t_trees = _freq_;
86      hec= .15 * .404686;
87      acre=.15;
88      if block=2 and plot=4 then hec= .10 * .404686;
89      if block=1 and plot=3 then hec= .10 * .404686;
90      if block=2 and plot=4 then acre= .10;
91      if block=1 and plot=3 then acre= .10;
92
93      qmd90=sqrt(ba90/.005454);
94      qmd91=sqrt(ba91/.005454);
95      qmd92=sqrt(ba92/.005454);
96      qmd93=sqrt(ba93/.005454);
97      qmd94=sqrt(ba94/.005454);
```



```

98      qmd95=sqrt(ba95/.005454);
99      qmd97=sqrt(ba97/.005454);
100
101      t_den= t_trees/acre;
102
103      t_ba90=t_trees*ba90/acre;
104      t_ba91=t_trees*ba91/acre;
105      t_ba92=t_trees*ba92/acre;
106      t_ba93=t_trees*ba93/acre;
107      t_ba94=t_trees*ba94/acre;
108      t_ba95=t_trees*ba95/acre;
109      t_ba97=t_trees*ba97/acre;
110
111      t_spba91=t_trees*sap_ba91/acre;
112      t_spba92=t_trees*sap_ba92/acre;
113      t_spba93=t_trees*sap_ba93/acre;
114      t_spba94=t_trees*sap_ba94/acre;
115      t_spba95=t_trees*sap_ba95/acre;
116      t_spba97=t_trees*sap_ba97/acre;
117

```

NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1 at 95:7 1 at 95:16 1 at 96:7 1 at 96:16 9 at 98:7 9 at 98:16 1 at 105:15 1 at 105:20 1 at 106:15
1 at 106:20 9 at 108:15 9 at 108:20 1 at 112:17 1 at 112:26 1 at 113:17 1 at 113:26 9 at 115:17 9 at 115:26
1 at 116:17 1 at 116:26

NOTE: The data set SAVE.MEANGRD has 32 observations and 106 variables.

NOTE: DATA statement used:

real time	1.68 seconds
cpu time	0.11 seconds

```

118      proc print; var grd_tree treat block plot t_den--t_spba97 csapba92--csapba97
119      n_csap92--n_csap97;
NOTE: The PROCEDURE PRINT printed pages 1-2.
NOTE: PROCEDURE PRINT used:
real time      0.09 seconds
cpu time       0.04 seconds

```

NOTE: The SAS System used:

real time	7.86 seconds
cpu time	2.56 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

chg.lst

Mon Oct 26 07:34:03 1998

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Status=2

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
1	0	1	1	1	346.667	97.869	97.869	94.943	109.403	97.709	116.671	106.769	60.7565	50.1167	51.0948
2	0	3	1	2	220.000	59.580	59.580	53.439	68.037	66.385	72.769	64.034	28.6542	18.6721	38.4013
3	100	3	1	2	146.667	41.734	41.734	41.257	44.825	39.930	39.514	37.482	20.6565	16.8774	25.6761
4	0	4	1	3	550.000	111.149	111.149	118.571	106.102	131.397	116.181	121.030	61.0433	56.4636	58.2617
5	100	4	1	3	70.000	19.831	19.831	15.153	14.676	19.481	17.050	17.032	12.5731	6.1848	5.6198
6	0	5	1	4	360.000	94.354	94.354	89.391	108.271	90.902	112.707	109.072	49.5321	44.9471	54.4904
7	100	5	1	4	240.000	63.156	63.156	63.485	71.567	63.882	57.873	69.975	35.1678	31.2318	34.9351
8	0	3	2	1	346.667	61.199	61.199	58.110	67.013	55.716	75.653	67.443	35.3063	28.3450	44.9937
9	100	3	2	1	240.000	46.802	46.802	37.076	50.165	43.471	54.260	33.828	25.3462	21.7167	26.6786
10	0	5	2	2	493.333	83.411	83.411	83.666	72.676	93.761	99.552	98.174	40.5807	47.2781	40.6786
11	100	5	2	2	326.667	56.596	56.596	50.233	54.279	61.443	75.830	62.153	26.4134	24.8628	23.7682
12	0	1	2	3	486.667	112.073	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.7186
13	0	4	2	4	720.000	105.432	105.432	110.097	99.588	117.896	120.353	113.158	57.4055	46.2744	63.9738
14	100	4	2	4	50.000	14.370	14.370	.	16.168	11.170	15.001	10.147	6.4690	.	8.3201
15	0	2	3	1	353.333	49.411	49.411	71.366	47.499	58.322	55.001	61.416	33.8839	48.3832	26.6628
16	100	2	3	1	53.333	11.152	11.152	10.963	.	4.890	14.103	17.606	8.9344	5.9718	.
17	0	5	3	2	466.667	65.417	65.417	75.701	92.503	81.985	66.671	82.061	50.3942	47.6054	61.1527
18	100	5	3	2	226.667	41.758	41.758	41.334	64.317	40.403	48.065	33.737	28.9367	25.1884	37.5103
19	0	3	3	3	326.667	38.069	38.069	42.755	36.673	44.373	61.059	57.787	28.1699	26.7068	22.2571
20	100	3	3	3	153.333	22.376	22.376	30.194	26.311	22.504	22.498	19.736	15.4195	21.9753	15.1868
21	0	4	3	4	413.333	52.859	52.859	48.787	56.387	82.826	74.032	58.485	39.9909	33.4732	37.0680
22	100	4	3	4	73.333	16.448	16.448	26.277	19.046	11.269	26.893	20.738	12.2250	13.9966	17.6802
23	0	1	3	5	613.333	58.768	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.7753
24	0	5	4	1	393.333	30.534	30.534	32.046	43.658	39.279	.	42.938	22.3905	23.0379	24.7015

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
1	54.9197	50.4217	61.5127	-67.2794	.	.	.	.	1	0	0	0	0
2	30.4500	27.4333	23.7216	.	.	.	.	.	0	0	0	0	0
3	17.4683	30.3530	16.2124	-39.7059	6.4801	6.69311	.	.	2	3	2	0	0
4	69.8597	54.3982	62.1347	.	.	.	.	.	0	0	0	0	0
5	12.6083	9.6107	10.0497	.	.	.	-27.2978	.	0	0	0	1	0
6	48.5380	56.0187	56.9038	.	.	.	.	.	0	0	0	0	0
7	36.9896	41.0337	34.8805	-17.9556	-0.6439	-4.52768	0.0000	.	6	4	2	1	0
8	36.7367	45.5062	29.1811	.	.	.	.	.	0	0	0	0	0
9	33.2371	34.9100	20.0227	21.9728	26.4926	.	.	.	7	5	0	0	0
10	42.9157	58.9327	40.4911	.	.	.	.	.	0	0	0	0	0
11	34.3995	48.9060	16.5336	12.0783	-14.4236	-2.26829	-3.8125	.	10	11	4	1	0
12	55.8726	65.8722	46.2110	.	.	.	.	.	0	0	0	0	0
13	59.6297	54.6622	44.2535	.	.	.	.	.	0	0	0	0	0
14	5.6503	8.6296	.	.	13.3779	.	.	.	0	1	0	0	0
15	28.1827	16.9082	19.4577	.	.	.	.	.	0	0	0	0	0
16	3.0106	6.6917	9.5554	.	.	.	.	.	0	0	0	0	0
17	45.1127	27.5815	38.8296	.	.	.	.	.	0	0	0	0	0
18	22.6247	17.6041	16.1601	.	.	.	.	.	0	0	0	0	0
19	26.0557	23.1712	27.7401	.	.	.	.	.	0	0	0	0	0
20	12.7756	8.6170	7.1836	.	.	.	.	.	0	0	0	0	0
21	50.6320	23.3808	24.2790	.	.	.	.	.	0	0	0	0	0
22	6.6793	6.7833	10.1910	0	0	0	0	0
23	39.1268	38.3228	42.3492	0	0	0	0	0
24	17.3082	.	11.4556	0	0	0	0	0

Status=2

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OBS	GRD_TREE	TREAT	BLOCK	PLOT	T_DEN	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93
25	100	5	4	1	266.667	26.467	26.467	35.320	29.022	32.372	.	22.840	16.8889	20.1900	16.4202
26	0	3	4	2	346.667	21.693	21.693	26.133	26.261	25.300	.	31.121	17.6386	15.5433	19.1952
27	100	3	4	2	220.000	15.814	15.814	14.903	18.034	22.333	.	20.808	13.8306	12.8607	13.6786
28	0	4	4	3	673.333	36.864	36.864	42.744	47.800	57.980	.	65.044	28.5142	25.1428	29.1145
29	100	4	4	3	120.000	10.923	10.923	13.921	8.960	17.499	.	13.292	8.8511	8.5933	4.2607
30	0	2	4	4	473.333	31.241	31.241	41.695	40.189	47.249	.	54.768	24.0700	22.4321	20.0237
31	100	2	4	4	80.000	7.119	7.119	5.345	10.742	7.542	.	11.339	5.4700	3.2070	6.0067
32	0	1	4	5	746.667	36.248	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.3053

OBS	T_SPBA94	T_SPBA95	T_SPBA97	CSAPBA92	CSAPBA93	CSAPBA94	CSAPBA95	CSAPBA97	N_CSAP92	N_CSAP93	N_CSAP94	N_CSAP95	N_CSAP97
25	14.2450	.	9.0048	6.1538	.	.	.	.	1	0	0	0	0
26	13.0712	.	9.4252	.	.	.	.	.	0	0	0	0	0
27	12.2713	.	10.2513	.	.	.	.	.	0	0	0	0	0
28	26.5111	.	11.7215	.	.	.	.	.	0	0	0	0	0
29	7.5985	.	7.2429	.	.	.	.	.	0	0	0	0	0
30	23.4440	.	14.1297	.	.	.	.	.	0	0	0	0	0
31	4.9151	.	5.4987	.	.	.	.	.	0	0	0	0	0
32	41.9430	.	21.9215	.	.	.	.	.	0	0	0	0	0

```

title ' all status ';
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=',' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
  if grd_tree<2 ;
grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=',' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=',' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
*if stat92=0;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=',' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
*if stat93=0;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=',' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
*if stat94=0;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=',' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
*if stat95=0;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=',' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
*if stat97=0;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

```

c1

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2

```
proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
```

```
data mean; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre=.10;
if block=1 and plot=3 then acre=.10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```

```
proc print;
```

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

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NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH, IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

```
real time      0.64 seconds
```

```
cpu time      0.12 seconds
```

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1 title 'all status ';
2 options ls=132 ps=55;
3 data t90; infile '90.dat' firstobs=2 delimiter=',' missover;
4 input block plot tag east north crown dbh90 rank grd_tree girdle;
5 if grd_tree<2 ;
6   grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

```
real time          0.47 seconds
```

```

real time      0.00 seconds
cpu time       0.15 seconds

```

```
7      proc sort; by block plot tag;
```

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NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: PROCEDURE SORT used:

real time	0.33 seconds
cpu time	0.08 seconds

```
8      data t91; infile '91.dat' firstobs=2 delimiter=',' missover;
9      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
10     CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.
The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.40 seconds
cpu time	0.14 seconds

```
11     proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.25 seconds
cpu time	0.06 seconds

```
12     data t92; infile '92.dat' firstobs=2 delimiter=',' missover;
13     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
14     *if stat92=0;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.
The maximum record length was 54.

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: DATA statement used:

real time	0.21 seconds
cpu time	0.06 seconds

3

The SAS System

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15 proc sort; by block plot tag;

NOTE: The data set WORK.T92 has 341 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.16 seconds
cpu time	0.03 seconds

16 data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
17 input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
18 sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
19 *if stat93=0;
20 drop stat92x;

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: DATA statement used:

real time	0.22 seconds
cpu time	0.07 seconds

21 proc sort; by block plot tag;

NOTE: The data set WORK.T93 has 325 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.25 seconds
cpu time	0.01 seconds

22 data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
23 input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
24 sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
25 *if stat94=0;
26 drop stat93x;

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 24:12 3 at 24:32 3 at 24:51 3 at 24:67

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: DATA statement used:

real time 0.23 seconds
cpu time 0.06 seconds

27 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 305 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.21 seconds
cpu time 0.02 seconds

28 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
29 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
30 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
31 *if stat95=0;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: DATA statement used:

real time 0.17 seconds
cpu time 0.04 seconds

32 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 196 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.17 seconds
cpu time 0.00 seconds

33 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
34 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
35 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
36 *if stat97=0;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 35:12 11 at 35:32 10 at 35:51 8 at 35:67

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: DATA statement used:

real time 0.24 seconds

cpu time 0.04 seconds

37 proc sort; by block plot tag;

38

NOTE: The data set WORK.T97 has 304 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.17 seconds

cpu time 0.02 seconds

39 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

40 if tag;

41 ba90 = (dbh90**2)* .005454;

42 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

43 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

44 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

45

46 woda91=((hrt91+sap91)*2)**2 * .005454;hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

47 woda92=((hrt91+sap91)*2)**2 * .005454;hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

48 woda93=((hrt91+sap91)*2)**2 * .005454;hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

49 woda94=((hrt91+sap91)*2)**2 * .005454;hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

50 woda95=((hrt91+sap91)*2)**2 * .005454;hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

51 woda97=((hrt91+sap91)*2)**2 * .005454;hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

52

53 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

54 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

55 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

56 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

57 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

58

NOTE: Division by zero detected at line 53 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15
RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25
CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016
HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.
WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

```

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
CSAPBA97=. _ERROR_=1 _N_=443
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
CRNTP95=. STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25
RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455
NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1179 at 42:42 1179 at 42:46 1195 at 43:14 1195 at 43:18 1218 at 43:42 1218 at 43:46 1325 at 44:14
1325 at 44:18 1216 at 44:42 1216 at 44:46 1179 at 47:47 1179 at 47:54 1179 at 47:58 1179 at 47:84
1195 at 48:47 1195 at 48:54 1195 at 48:58 1195 at 48:84 1218 at 49:47 1218 at 49:54 1218 at 49:58
1218 at 49:84 1324 at 50:47 1324 at 50:54 1324 at 50:58 1324 at 50:84 1224 at 51:47 1224 at 51:54
1224 at 51:58 1224 at 51:84 1179 at 53:19 1179 at 53:29 1183 at 53:38 1195 at 54:19 1195 at 54:29
1195 at 54:38 1218 at 55:19 1218 at 55:29 1218 at 55:38 1324 at 56:19 1324 at 56:29 1324 at 56:38
1224 at 57:19 1224 at 57:29 1224 at 57:38
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to
missing values.
Each place is given by: (Number of times) at (Line):(Column).
4 at 53:29
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
NOTE: DATA statement used:
real time 2.63 seconds
cpu time 1.06 seconds

59 proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
60 sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
61 output out=mean mean=

```

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The SAS System

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```
62      n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;  
63
```

NOTE: The data set WORK.MEAN has 18 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

```
      real time      0.28 seconds  
      cpu time       0.12 seconds
```

```
64      data mean; set mean;  
65      if block=1 and plot=1 then treat=1;  
66      if block=1 and plot=2 then treat=3;  
67      if block=1 and plot=3 then treat=4;  
68      if block=1 and plot=4 then treat=5;  
69      if block=2 and plot=1 then treat=3;  
70      if block=2 and plot=2 then treat=5;  
71      if block=2 and plot=3 then treat=1;  
72      if block=2 and plot=4 then treat=4;  
73      if block=3 and plot=1 then treat=2;  
74      if block=3 and plot=2 then treat=5;  
75      if block=3 and plot=3 then treat=3;  
76      if block=3 and plot=4 then treat=4;  
77      if block=3 and plot=5 then treat=1;  
78      if block=4 and plot=1 then treat=5;  
79      if block=4 and plot=2 then treat=3;  
80      if block=4 and plot=3 then treat=4;  
81      if block=4 and plot=4 then treat=2;  
82      if block=4 and plot=5 then treat=1;  
83      t_trees = _freq_;  
84      hec= .15 * .404686;  
85      acre=.15;  
86      if block=2 and plot=4 then hec= .10 * .404686;  
87      if block=1 and plot=3 then hec= .10 * .404686;  
88      if block=2 and plot=4 then acre=.10;  
89      if block=1 and plot=3 then acre=.10;  
90  
91      qmd90=sqrt(ba90/.005454);  
92      qmd91=sqrt(ba91/.005454);  
93      qmd92=sqrt(ba92/.005454);  
94      qmd93=sqrt(ba93/.005454);  
95      qmd94=sqrt(ba94/.005454);  
96      qmd95=sqrt(ba95/.005454);  
97      qmd97=sqrt(ba97/.005454);  
98  
99      t_den= t_trees/acre;  
100  
101     t_ba90=t_trees*ba90/acre;  
102     t_ba91=t_trees*ba91/acre;  
103     t_ba92=t_trees*ba92/acre;  
104     t_ba93=t_trees*ba93/acre;  
105     t_ba94=t_trees*ba94/acre;  
106     t_ba95=t_trees*ba95/acre;  
107     t_ba97=t_trees*ba97/acre;
```

108

109 t_spba91=t_trees*sap_ba91/acre;

110 t_spba92=t_trees*sap_ba92/acre;

111 t_spba93=t_trees*sap_ba93/acre;

112 t_spba94=t_trees*sap_ba94/acre;

113 t_spba95=t_trees*sap_ba95/acre;

114 t_spba97=t_trees*sap_ba97/acre;

115

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

5 at 96:7 5 at 96:16 5 at 106:15 5 at 106:20 5 at 113:17 5 at 113:26

NOTE: The data set WORK.MEAN has 18 observations and 106 variables.

NOTE: DATA statement used:

real time 0.25 seconds

cpu time 0.10 seconds

116 proc print;

NOTE: The PROCEDURE PRINT printed pages 1-4.

NOTE: PROCEDURE PRINT used:

real time 0.13 seconds

cpu time 0.09 seconds

NOTE: The SAS System used:

real time 8.07 seconds

cpu time 2.33 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

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OBS	BLOCK	PLOT	_TYPE_	_FREQ_	GRD_TREE	BA90	BA91	BA92	BA93	BA94	BA95	BA97	DBH91	HRT91	SAP91	RAD1091
1	1	1	0	52	0.0000	0.28232	0.28232	0.27387	0.31558	0.28185	0.33655	0.30799	7.13462	1.77596	1.57212	0.25962
2	1	2	0	55	40.0000	0.27631	0.27631	0.26594	0.30758	0.29192	0.30623	0.27686	7.08364	1.61909	1.32909	0.26273
3	1	3	0	62	11.2903	0.21126	0.21126	0.21565	0.19420	0.25103	0.21817	0.22504	6.13387	1.41129	1.28468	0.22016
4	1	4	0	90	40.0000	0.26252	0.26252	0.25777	0.29917	0.25826	0.28769	0.29841	6.85444	1.54778	1.41556	0.25333
5	2	1	0	88	40.9091	0.18409	0.18409	0.16105	0.20352	0.16752	0.22032	0.18450	5.66023	1.53409	1.08125	0.24432
6	2	2	0	123	39.8374	0.17074	0.17074	0.16019	0.15737	0.18929	0.21137	0.19817	5.47724	1.48984	0.92439	0.17154
7	2	3	0	73	0.0000	0.23029	0.23029	0.20529	0.23027	0.26139	0.27159	0.24430	6.42740	1.58562	1.09110	0.20959
8	2	4	0	77	6.4935	0.15559	0.15559	0.15291	0.14920	0.16772	0.18487	0.15986	5.26883	1.28052	1.03182	0.21753
9	3	1	0	61	13.1148	0.14893	0.14893	0.20280	0.13443	0.15895	0.17379	0.19987	4.84426	0.55000	1.57213	0.61230
10	3	2	0	104	32.6923	0.15458	0.15458	0.16797	0.23488	0.17666	0.16263	0.16909	4.87981	0.70529	1.55288	0.63510
11	3	3	0	72	31.9444	0.12593	0.12593	0.14849	0.13995	0.13818	0.17256	0.16726	4.53056	0.59653	1.44375	0.62361
12	3	4	0	73	15.0685	0.14241	0.14241	0.15007	0.15286	0.18793	0.19251	0.16168	4.75890	0.60205	1.57123	0.61233
13	3	5	0	92	0.0000	0.09582	0.09582	0.08930	0.10846	0.10255	0.16656	0.14603	3.86848	0.43478	1.33533	0.69130
14	4	1	0	99	40.4040	0.08636	0.08636	0.10575	0.11002	0.10955	.	0.10021	3.83838	0.42677	1.22778	0.69293
15	4	2	0	85	38.8235	0.06619	0.06619	0.07284	0.07793	0.08546	.	0.09288	3.30706	0.37412	1.18412	0.70824
16	4	3	0	119	15.1261	0.06024	0.06024	0.07224	0.07114	0.09327	.	0.09830	3.21933	0.24454	1.20210	0.82647
17	4	4	0	83	14.4578	0.06932	0.06932	0.08684	0.09362	0.09917	.	0.12221	3.47229	0.28675	1.26687	0.85602
18	4	5	0	112	0.0000	0.04855	0.04855	0.05231	0.05438	0.09792	.	0.08987	2.81161	0.19955	1.05313	0.80804

OBS	RAD0591	STMLN91	CRNHT91	CRNTP91	STAT92	DBH92	HRT92	SAP92	RAD1092	RAD0592	STMLN92	CRNHT92	CRNTP92	STAT93	DBH93
1	0.13077	40.4038	14.4808	40.4038	0.16667	7.05000	1.97917	1.50000	0.25000	0.14167	40.4167	20.0000	40.4167	0.00000	7.51000
2	0.12455	39.3455	15.3455	39.3455	0.40000	6.92667	1.70000	1.52667	0.22667	0.10333	41.0667	19.6000	41.0667	0.46154	7.46154
3	0.10806	37.2581	15.7903	37.2581	0.07143	6.23571	1.54286	1.50357	0.16786	0.08214	39.5000	21.2857	39.5000	0.07692	5.88462
4	0.12278	41.2889	17.5778	41.2889	0.58333	6.73333	1.63333	1.37917	0.21458	0.10625	42.8333	24.7917	42.8333	0.42857	7.31429
5	0.12330	34.1364	12.0455	34.1364	0.62500	5.29583	1.51250	0.92292	0.15000	0.07917	33.9167	13.8750	33.9167	0.50000	5.91000
6	0.07927	35.1545	13.3008	35.1545	0.81081	5.32703	1.39459	0.96216	0.14324	0.06351	35.5676	16.5946	35.5676	0.73333	5.20667
7	0.09863	37.0000	13.3151	37.0000	0.00000	6.10000	1.48929	1.17500	0.19643	0.09286	36.9286	12.7857	37.1429	0.00000	6.43333
8	0.10065	33.7013	12.7662	33.7013	0.00000	5.24667	1.42667	1.07000	0.21667	0.09667	33.2000	12.4000	32.2667	0.11765	5.15294
9	0.29754	25.6885	4.5574	25.6885	0.00000	5.87692	0.81154	1.80000	0.60769	0.26923	29.9231	5.4615	29.9231	0.00000	4.60000
10	0.31346	26.6923	5.2115	26.6923	0.00000	5.26190	1.00000	1.35000	0.63810	0.30238	28.2381	5.4286	28.2381	0.00000	6.18571
11	0.31667	25.4722	4.4306	25.4722	0.00000	4.90000	0.74667	1.43000	0.60333	0.28667	25.6000	4.3333	25.6000	0.00000	4.84000
12	0.30274	26.4521	4.3973	26.4521	0.00000	4.96000	0.79333	1.59333	0.63000	0.28333	28.0000	5.1333	28.0000	0.00000	4.96667
13	0.35054	21.6739	3.5978	21.6739	0.00000	3.77895	0.49211	1.26842	0.59474	0.28684	21.3158	3.5263	21.3158	0.00000	4.20526
14	0.33333	24.2020	4.3434	24.2020	0.09524	4.23333	0.52619	1.35238	0.58333	0.26429	24.7143	5.2381	24.7143	0.00000	4.41500
15	0.32176	19.5176	3.2000	19.5176	0.05556	3.52222	0.43333	1.13056	0.63889	0.29167	20.6667	3.2778	20.2222	0.15000	3.58500
16	0.39118	17.9748	2.8824	17.9748	0.00000	3.52917	0.39375	1.20625	0.78958	0.36667	18.8333	3.5833	18.7500	0.00000	3.42500
17	0.40964	17.7831	2.4337	17.7831	0.00000	3.87647	0.44412	1.35000	0.91176	0.42353	19.4118	2.3529	19.4118	0.00000	4.05294
18	0.38571	14.9821	1.9018	14.9821	0.00000	2.98261	0.29348	1.08478	0.81087	0.36522	15.1739	2.1304	15.1739	0.00000	3.05217

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OBS	HRT93	SAP93	RAD1093	RAD0593	STMLN93	CRNHT93	CRNTP93	STAT94	DBH94	HRT94	SAP94	RAD1094	RAD0594	STMLN94	CRNHT94
1	2.07000	1.64500	0.19000	0.09500	40.5000	16.9000	39.9000	0.00000	7.14000	1.97500	1.59000	0.35000	0.18000	40.7000	20.1000
2	1.66154	1.36923	0.20385	0.09615	41.3077	16.2308	41.2308	0.33333	7.26667	1.61667	1.43750	0.29375	0.16667	40.5833	18.6667
3	1.41923	1.12692	0.20000	0.09231	36.3077	16.9231	36.3077	0.07692	6.75385	1.55385	1.38077	0.25385	0.12692	39.0000	20.6923
4	1.78333	1.44286	0.23571	0.10476	42.0000	22.2381	42.0000	0.21053	6.78947	1.38947	1.54211	0.24474	0.11316	40.0526	20.7368
5	1.52000	1.03500	0.18750	0.09250	34.9000	13.7000	34.9000	0.00000	5.43333	1.33333	0.98333	0.20000	0.10000	33.2667	16.1333
6	1.43333	0.92833	0.14333	0.06667	34.4667	14.4667	34.4667	0.34783	5.81739	1.52174	1.01304	0.20978	0.09565	36.6818	19.2727
7	1.65000	1.07667	0.17667	0.08000	37.2667	16.2667	37.2667	0.00000	6.87333	1.62333	1.14333	0.19667	0.09333	38.0667	19.2000
8	1.15000	1.03529	0.16765	0.07353	33.5882	16.6471	33.5882	0.00000	5.49333	1.27667	0.95000	0.17000	0.08000	36.0000	19.6000
9	0.57500	1.34167	0.45000	0.23333	23.4167	4.33333	23.4167	0.00000	5.11667	0.68750	1.48750	0.45833	0.20000	27.4167	7.1667
10	1.02619	1.61667	0.55714	0.24286	30.3333	5.2381	30.3333	0.00000	5.37619	0.84524	1.38095	0.46905	0.19881	26.7619	8.0000
11	0.71667	1.35000	0.53333	0.22667	25.8000	5.0667	25.8000	0.00000	4.75000	0.72500	1.31786	0.54286	0.24286	26.5000	6.3571
12	0.62000	1.56333	0.60333	0.30000	27.0000	5.0000	27.0000	0.00000	5.62000	0.84667	1.62000	0.55667	0.24333	29.2667	7.7333
13	0.40789	1.44737	0.62368	0.27632	21.5789	3.3158	21.5789	0.00000	4.05000	0.44444	1.33889	0.57500	0.28889	21.8889	5.6111
14	0.59250	1.39500	0.58500	0.25750	25.3000	4.9500	25.3000	0.00000	4.31500	0.65250	1.15750	0.45000	0.18750	24.8500	7.0500
15	0.40000	1.12750	0.55500	0.25250	19.9500	3.6000	18.8000	0.15789	3.77500	0.55000	1.11875	0.48438	0.20625	20.8125	5.5625
16	0.37521	1.18333	0.75833	0.34375	18.1667	3.0000	18.6250	0.00000	4.01200	0.50000	1.27200	0.69800	0.30600	20.6000	5.4800
17	0.47647	1.32059	0.83235	0.39118	18.8235	3.1176	18.8235	0.00000	4.21765	0.47059	1.40000	0.69706	0.30588	20.1176	4.7059
18	0.26522	1.01087	0.75652	0.34565	15.1304	2.1739	15.1304	0.00000	3.95909	0.32727	1.27273	0.68864	0.30227	18.1818	4.2273

OBS	CRNTP94	STAT95	DBH95	HRT95	SAP95	RAD0595	RAD1095	STMLN95	CRNHT95	CRNTP95	STAT97	DBH97	SAP97	HRT97	RAD0597
1	40.7000	0.00000	7.77000	2.08500	1.70500	0.15500	0.31000	37.5000	37.5000	19.1000	0.00000	7.48000	1.47500	1.73500	0.11300
2	40.5833	0.00000	7.47000	1.49500	1.92000	0.13000	0.24500	38.4600	37.9600	20.8000	0.00000	7.11000	1.34500	1.75500	0.08050
3	38.6923	0.21429	6.22857	1.48929	1.24286	0.13214	0.24286	36.9929	36.9154	22.7692	0.21429	6.31429	0.99286	1.35000	0.05115
4	40.1053	0.11765	7.10000	1.39706	1.60882	0.18235	0.31471	38.7647	38.8688	23.7000	0.45000	7.36500	1.35313	1.51250	0.07079
5	32.9333	0.00000	6.26000	1.08333	1.60000	0.29000	0.44667	34.5467	54.5600	17.8400	0.00000	5.69375	1.02188	1.37500	0.05154
6	35.8182	0.15000	6.16842	1.03750	1.42250	0.22500	0.35500	37.5158	36.9889	21.9222	0.19048	5.88095	1.06316	1.46842	0.05132
7	38.0667	0.00000	6.96000	1.22667	1.82000	0.23333	0.33333	35.6000	35.6000	18.3400	0.00000	6.62143	1.11786	1.61429	0.04545
8	36.0000	0.00000	5.74000	1.12667	1.26667	0.24667	0.36667	33.4000	33.4000	17.5533	0.11765	5.35882	0.99375	1.37500	0.04559
9	27.4167	0.00000	5.35000	1.57500	0.90417	0.35417	0.60000	27.7500	27.7500	5.2500	0.00000	5.72500	0.98750	1.47500	0.08375
10	26.4286	0.00000	5.04762	1.32619	1.09762	0.33095	0.57619	26.7619	26.7143	5.6190	0.00000	5.14500	1.01750	1.11750	0.11625
11	26.5000	0.07143	5.43571	1.35000	0.94286	0.32857	0.58214	28.2143	27.5714	5.7143	0.00000	5.34667	1.34667	0.99000	0.10167
12	29.2333	0.00000	5.44286	1.43571	0.94286	0.37143	0.66071	28.7857	28.7857	5.8571	0.00000	5.21429	1.06071	1.23214	0.09286
13	21.8889	0.00000	5.30000	1.27632	1.05263	0.40526	0.75526	26.4211	26.4211	4.7368	0.00000	4.85789	1.25526	0.85526	0.10158
14	24.4500	.	.	.	.	.	.	.	.	.	0.14286	4.17619	0.73250	1.08500	0.08881
15	19.6875	.	.	.	.	.	.	.	.	.	0.00000	3.96471	0.87059	0.86176	0.07971
16	20.3200	.	.	.	.	.	.	.	.	.	0.00000	4.16400	0.80800	0.97000	0.11780
17	20.0882	0.00000	4.63125	1.28125	0.85938	0.13313
18	18.1818	0.00000	3.94348	1.03696	0.65435	0.11870

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OBS RAD1097 STMLN97 CRNTP97 CRNHT97 SAP_BA91 SAP_BA92 SAP_BA93 SAP_BA94 SAP_BA95 SAP_BA97 CSAPBA92 CSAPBA93 CSAPBA94 CSAPBA95

1	0.16900	43.1000	43.1000	23.1000	0.17526	0.14457	0.14739	0.15842	0.14545	0.17744	-19.4591	-15.0220	-12.4676	-13.4210
2	0.13500	40.5000	35.2000	19.7000	0.13448	0.10299	0.17479	0.13197	0.15760	0.10891	-12.7201	6.7976	-2.8251	8.2368
3	0.09692	40.1429	37.2143	23.5000	0.11874	0.10164	0.10396	0.14336	0.10713	0.11953	-21.1289	-2.1965	-1.6548	-12.7589
4	0.13447	44.7000	41.0625	24.7500	0.14117	0.12793	0.14777	0.14295	0.16103	0.15488	1.2545	-9.9645	5.0728	15.3671
5	0.10154	35.2500	32.4375	18.3125	0.10338	0.08613	0.11768	0.11681	0.13505	0.08404	0.2917	7.8812	13.4399	26.7624
6	0.08447	36.0476	35.6842	20.7368	0.08170	0.08411	0.07728	0.09416	0.12853	0.08042	5.2790	-5.4382	-0.4519	33.2657
7	0.07955	37.7857	37.7857	19.8571	0.10283	0.08580	0.09805	0.11481	0.13535	0.09495	-6.4905	-6.0013	2.2123	33.3220
8	0.09382	34.6471	34.3750	19.0000	0.08295	0.06427	0.09341	0.08483	0.08881	0.06146	-18.9418	4.1229	2.9209	13.3264
9	0.19750	28.4167	28.0833	9.3333	0.10529	0.13117	0.07546	0.07782	0.06079	0.07575	-6.4343	-6.0247	-5.8965	-76.3417
10	0.25625	28.1000	28.1000	11.1000	0.11442	0.10462	0.14580	0.09787	0.06441	0.08023	-16.4836	-5.8508	-5.1248	-52.6247
11	0.23433	27.9333	26.8667	9.7333	0.09081	0.09817	0.08256	0.08052	0.06567	0.07730	-2.1844	-6.4908	-6.0824	-44.2939
12	0.21857	29.3571	29.3571	9.7143	0.10729	0.09563	0.10987	0.11412	0.05913	0.07020	-6.1854	-2.3710	-9.7140	-57.3245
13	0.24053	26.1579	26.1579	7.7895	0.07452	0.05097	0.07300	0.06379	0.06248	0.06905	-8.2177	-0.7664	-1.2834	-37.5903
14	0.22714	26.6667	23.5238	10.4286	0.05951	0.06673	0.06225	0.04824	.	0.03075	-2.5851	-7.9124	-9.7863	.
15	0.19563	20.9412	16.4706	6.9412	0.05553	0.04938	0.05775	0.04561	.	0.03975	-4.2482	-1.0474	-10.6230	.
16	0.28720	21.9200	21.3600	6.4400	0.04710	0.04305	0.04292	0.04225	.	0.02256	-4.6178	-5.9469	-10.7376	.
17	0.32563	21.3125	19.9375	6.0625	0.05339	0.04696	0.04809	0.05093	.	0.03957	-6.3650	-8.2334	-5.7093	.
18	0.29848	19.5652	19.5652	5.3043	0.03790	0.02971	0.02853	0.05617	.	0.02936	-3.9670	-4.9354	-3.0909	.

OBS CSAPBA97 N_92 N_93 N_94 N_95 N_97 TREAT T_TREES HEC ACRE QMD90 QMD91 QMD92 QMD93 QMD94 QMD95 QMD97 T_DEN

1	0.2046	12	10	10	10	10	1	52	0.060703	0.15	7.19466	7.19466	7.08625	7.60677	7.18874	7.85538	7.51465	346.667
2	-18.1792	15	13	12	10	10	3	55	0.060703	0.15	7.11771	7.11771	6.98288	7.50969	7.31596	7.49313	7.12482	366.667
3	3.6785	14	13	13	14	14	4	62	0.040469	0.10	6.22369	6.22369	6.28803	5.96715	6.78426	6.32467	6.42351	620.000
4	-0.6152	24	21	19	17	20	5	90	0.060703	0.15	6.93778	6.93778	6.87471	7.40630	6.88132	7.26276	7.39693	600.000
5	-0.3873	24	20	15	15	16	3	88	0.060703	0.15	5.80980	5.80980	5.43411	6.10868	5.54214	6.35584	5.81620	586.667
6	-12.4498	37	30	23	19	21	5	123	0.060703	0.15	5.59514	5.59514	5.41946	5.37153	5.89119	6.22541	6.02783	820.000
7	-4.5402	14	15	15	15	14	1	73	0.060703	0.15	6.49797	6.49797	6.13514	6.49774	6.92286	7.05663	6.69269	486.667
8	-20.0818	15	17	15	15	17	4	77	0.040469	0.10	5.34108	5.34108	5.29497	5.23034	5.54545	5.82208	5.41387	770.000
9	-39.4007	13	12	12	12	12	2	61	0.060703	0.15	5.22549	5.22549	6.09792	4.96471	5.39846	5.64491	6.05358	406.667
10	-37.2076	21	21	21	21	20	5	104	0.060703	0.15	5.32374	5.32374	5.54956	6.56241	5.69130	5.46068	5.56808	693.333
11	-17.9121	15	15	14	14	15	3	72	0.060703	0.15	4.80512	4.80512	5.21785	5.06557	5.03339	5.62488	5.53787	480.000
12	-32.7258	15	15	15	14	14	4	73	0.060703	0.15	5.10994	5.10994	5.24557	5.29408	5.86998	5.94114	5.44466	486.667
13	-21.5748	19	19	18	19	19	1	92	0.060703	0.15	4.19144	4.19144	4.04631	4.45935	4.33622	5.52616	5.17438	613.333
14	-55.1891	21	20	20	0	21	5	99	0.060703	0.15	3.97934	3.97934	4.40330	4.49138	4.48180	.	4.28636	660.000
15	-32.6994	18	20	16	0	17	3	85	0.060703	0.15	3.48369	3.48369	3.65437	3.78001	3.95854	.	4.12681	566.667
16	-66.4673	24	24	25	0	25	4	119	0.060703	0.15	3.32332	3.32332	3.63931	3.61167	4.13546	.	4.24542	793.333
17	-31.8463	17	17	17	0	16	2	83	0.060703	0.15	3.56523	3.56523	3.99021	4.14310	4.26415	.	4.73372	553.333
18	-31.7609	23	23	22	0	23	1	112	0.060703	0.15	2.98345	2.98345	3.09684	3.15774	4.23712	.	4.05929	746.667

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OBS	T_BA90	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93	T_SPBA94	T_SPBA95	T_SPBA97
1	97.869	97.869	94.943	109.403	97.709	116.671	106.769	60.7565	50.1167	51.095	54.9197	50.422	61.5127
2	101.314	101.314	97.512	112.779	107.036	112.283	101.516	49.3107	37.7642	64.089	48.3902	57.786	39.9340
3	130.979	130.979	133.701	120.404	155.637	135.264	139.525	73.6165	63.0163	64.454	88.8809	66.422	74.1075
4	157.510	157.510	154.659	179.502	154.957	172.611	179.048	84.6999	76.7596	88.663	85.7713	96.619	92.9300
5	108.001	108.001	94.485	119.399	98.279	129.256	108.239	60.6525	50.5269	69.039	68.5286	79.230	49.3011
6	140.007	140.007	131.353	129.040	155.215	173.327	162.499	66.9940	68.9674	63.374	77.2091	105.398	65.9449
7	112.073	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.719	55.8726	65.872	46.2110
8	119.802	119.802	117.742	114.886	129.145	142.352	123.090	63.8745	49.4879	71.929	65.3203	68.383	47.3266
9	60.563	60.563	82.474	54.669	64.639	70.675	81.279	42.8183	53.3436	30.687	31.6466	24.721	30.8056
10	107.174	107.174	116.459	162.849	122.484	112.759	117.238	79.3310	72.5334	101.090	67.8552	44.655	55.6250
11	60.446	60.446	71.275	67.176	66.325	82.829	80.286	43.5895	47.1226	39.628	38.6517	31.522	37.1064
12	69.307	69.307	73.035	74.392	91.458	93.689	78.684	52.2159	46.5419	53.470	55.5382	28.778	34.1644
13	58.768	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.775	39.1268	38.323	42.3492
14	57.001	57.001	69.794	72.614	72.304	.	66.136	39.2793	44.0442	41.084	31.8388	.	20.2948
15	37.508	37.508	41.273	44.160	48.430	.	52.635	31.4692	27.9802	32.726	25.8471	.	22.5232
16	47.788	47.788	57.307	56.440	73.998	.	77.985	37.3654	34.1550	34.048	33.5157	.	17.8993
17	38.360	38.360	48.050	51.803	54.874	.	67.625	29.5400	25.9857	26.609	28.1817	.	21.8966
18	36.248	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.305	41.9430	.	21.9215

```

title ' status =0';
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
  if grd_tree<2 ;
grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
if stat92=0;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
if stat93=0;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
if stat94=0;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
if stat95=0;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
if stat97=0;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

```

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```
proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
```

```
data mean; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre=.10;
if block=1 and plot=3 then acre=.10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```

```
proc print
```

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The SAS System

07:31 Monday, October 26, 1998

NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

real time 4.42 seconds

cpu time 0.16 seconds

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1      title ' status =0';
2      options ls=132 ps=55;
3      data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
4      input block plot tag east north crown dbh90 rank grd_tree girdle;
5      if grd_tree<2 ;
6      grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,

Owner Name=zumbrunn, Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

real time 1.90 seconds

cpu time 0.15 seconds

```
7      proc sort; by block plot tag;
```

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: PROCEDURE SORT used:

real time	0.52 seconds
cpu time	0.06 seconds

```
8      data t91; infile '91.dat' firstobs=2 delimiter=',' misover;
9      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
10     CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.

The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.54 seconds
cpu time	0.19 seconds

```
11     proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.22 seconds
cpu time	0.06 seconds

```
12     data t92; infile '92.dat' firstobs=2 delimiter=',' misover;
13     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
14     if stat92=0;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 301 observations and 12 variables.

NOTE: DATA statement used:

real time	0.21 seconds
cpu time	0.07 seconds

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15 proc sort; by block plot tag;

NOTE: The data set WORK.T92 has 301 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.04 seconds

16 data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
17 input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
18 sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
19 if stat93=0;
20 drop stat92x;

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 296 observations and 12 variables.

NOTE: DATA statement used:

real time	0.20 seconds
cpu time	0.06 seconds

21 proc sort; by block plot tag;

NOTE: The data set WORK.T93 has 296 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.16 seconds
cpu time	0.03 seconds

22 data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
23 input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
24 sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
25 if stat94=0;
26 drop stat93x;

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 24:12 3 at 24:32 3 at 24:51 3 at 24:67

NOTE: The data set WORK.T94 has 293 observations and 12 variables.

NOTE: DATA statement used:

real time	0.22 seconds
cpu time	0.06 seconds

27 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 293 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.15 seconds
cpu time	0.04 seconds

```
28           data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
29           input block plot tag STAT95 DBH95 HRT95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
30           sap95=sap95/20; rad1095=rad1095/20;rad0595=rad0595/20; hrt95=hrt95/20;
31           if stat95=0;
```

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 190 observations and 12 variables.

NOTE: DATA statement used:

real time	0.15 seconds
cpu time	0.04 seconds

32 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 190 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.11 seconds
cpu time	0.02 seconds

```
33           data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
34           input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
35           sap97=sap97/20; rad1097=rad1097/20;rad0597=rad0597/20; hrt97=hrt97/20;
36           if stat97=0;
```

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 35:12 11 at 35:32 10 at 35:51 8 at 35:67

NOTE: The data set WORK.T97 has 291 observations and 12 variables.

NOTE: DATA statement used:

real time 0.21 seconds

cpu time 0.06 seconds

37 proc sort; by block plot tag;

38

NOTE: The data set WORK.T97 has 291 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.15 seconds

cpu time 0.01 seconds

39 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

40 if tag;

41 ba90 = (dbh90**2)* .005454;

42 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

43 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

44 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

45

46 woda91=((hrt91+sap91)*2)**2 * .005454;hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

47 woda92=((hrt91+sap91)*2)**2 * .005454;hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

48 woda93=((hrt91+sap91)*2)**2 * .005454;hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

49 woda94=((hrt91+sap91)*2)**2 * .005454;hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

50 woda95=((hrt91+sap91)*2)**2 * .005454;hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

51 woda97=((hrt91+sap91)*2)**2 * .005454;hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

52

53 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

54 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

55 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

56 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

57 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

58

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

1219 at 42:42 1219 at 42:46 1224 at 43:14 1224 at 43:18 1227 at 43:42 1227 at 43:46 1331 at 44:14

1331 at 44:18 1229 at 44:42 1229 at 44:46 1219 at 47:47 1219 at 47:54 1219 at 47:58 1219 at 47:84

1224 at 48:47 1224 at 48:54 1224 at 48:58 1224 at 48:84 1227 at 49:47 1227 at 49:54 1227 at 49:58

1227 at 49:84 1330 at 50:47 1330 at 50:54 1330 at 50:58 1330 at 50:84 1229 at 51:47 1229 at 51:54

1229 at 51:58 1229 at 51:84 1219 at 53:19 1219 at 53:29 1219 at 53:38 1224 at 54:19 1224 at 54:29

1224 at 54:38 1227 at 55:19 1227 at 55:29 1227 at 55:38 1330 at 56:19 1330 at 56:29 1330 at 56:38

1229 at 57:19 1229 at 57:29 1229 at 57:38

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

NOTE: DATA statement used:

real time	3.46 seconds
cpu time	1.11 seconds

```
59      proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
60      sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
61      output out=mean mean=
62      n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
63
```

NOTE: The data set WORK.MEAN has 18 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.27 seconds
cpu time	0.14 seconds

```
64      data mean; set mean;
65      if block=1 and plot=1 then treat=1;
66      if block=1 and plot=2 then treat=3;
67      if block=1 and plot=3 then treat=4;
68      if block=1 and plot=4 then treat=5;
69      if block=2 and plot=1 then treat=3;
70      if block=2 and plot=2 then treat=5;
71      if block=2 and plot=3 then treat=1;
72      if block=2 and plot=4 then treat=4;
73      if block=3 and plot=1 then treat=2;
74      if block=3 and plot=2 then treat=5;
75      if block=3 and plot=3 then treat=3;
76      if block=3 and plot=4 then treat=4;
77      if block=3 and plot=5 then treat=1;
78      if block=4 and plot=1 then treat=5;
79      if block=4 and plot=2 then treat=3;
80      if block=4 and plot=3 then treat=4;
81      if block=4 and plot=4 then treat=2;
82      if block=4 and plot=5 then treat=1;
83      t_trees = _freq_;
84      hec= .15 * .404686;
85      acre=.15;
86      if block=2 and plot=4 then hec= .10 * .404686;
87      if block=1 and plot=3 then hec= .10 * .404686;
88      if block=2 and plot=4 then acre=.10;
89      if block=1 and plot=3 then acre=.10;
90
91      qmd90=sqrt(ba90/.005454);
92      qmd91=sqrt(ba91/.005454);
93      qmd92=sqrt(ba92/.005454);
94      qmd93=sqrt(ba93/.005454);
95      qmd94=sqrt(ba94/.005454);
96      qmd95=sqrt(ba95/.005454);
97      qmd97=sqrt(ba97/.005454);
98
```

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```
99      t_den= t_trees/acre;
100
101      t_ba90=t_trees*ba90/acre;
102      t_ba91=t_trees*ba91/acre;
103      t_ba92=t_trees*ba92/acre;
104      t_ba93=t_trees*ba93/acre;
105      t_ba94=t_trees*ba94/acre;
106      t_ba95=t_trees*ba95/acre;
107      t_ba97=t_trees*ba97/acre;
108
109      t_spba91=t_trees*sap_ba91/acre;
110      t_spba92=t_trees*sap_ba92/acre;
111      t_spba93=t_trees*sap_ba93/acre;
112      t_spba94=t_trees*sap_ba94/acre;
113      t_spba95=t_trees*sap_ba95/acre;
114      t_spba97=t_trees*sap_ba97/acre;
115
```

NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).

5 at 96:7 5 at 96:16 5 at 106:15 5 at 106:20 5 at 113:17 5 at 113:26

NOTE: The data set WORK.MEAN has 18 observations and 106 variables.

NOTE: DATA statement used:

real time	0.26 seconds
cpu time	0.10 seconds

```
116      proc print;
```

NOTE: The PROCEDURE PRINT printed pages 1-4.

NOTE: PROCEDURE PRINT used:

real time	0.28 seconds
cpu time	0.10 seconds

NOTE: The SAS System used:

real time	14.23 seconds
cpu time	2.55 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

c1.1st Mon Oct 26 07:32:08 1998

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status =0

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OBS BLOCK PLOT _TYPE_ _FREQ_ GRD_TREE BA90 BA91 BA92 BA93 BA94 BA95 BA97 DBH91 HRT91 SAP91 RAD1091

1	1	1	0	52	0.0000	0.28232	0.28232	0.27516	0.31558	0.28185	0.33655	0.30799	7.13462	1.77596	1.57212	0.25962
2	1	2	0	55	40.0000	0.27631	0.27631	0.27508	0.30113	0.31297	0.30623	0.27686	7.08364	1.61909	1.32909	0.26273
3	1	3	0	62	11.2903	0.21126	0.21126	0.21558	0.19291	0.25391	0.21786	0.22005	6.13387	1.41129	1.28468	0.22016
4	1	4	0	90	40.0000	0.26252	0.26252	0.26555	0.28951	0.24968	0.29170	0.30603	6.85444	1.54778	1.41556	0.25333
5	2	1	0	88	40.9091	0.18409	0.18409	0.16974	0.22892	0.16752	0.22032	0.18450	5.66023	1.53409	1.08125	0.24432
6	2	2	0	123	39.8374	0.17074	0.17074	0.18180	0.16575	0.19062	0.20973	0.19556	5.47724	1.48984	0.92439	0.17154
7	2	3	0	73	0.0000	0.23029	0.23029	0.20529	0.23027	0.26139	0.27159	0.24430	6.42740	1.58562	1.09110	0.20959
8	2	4	0	77	6.4935	0.15559	0.15559	0.15291	0.13832	0.16772	0.18487	0.15716	5.26883	1.28052	1.03182	0.21753
9	3	1	0	61	13.1148	0.14893	0.14893	0.20280	0.13443	0.15895	0.17379	0.19987	4.84426	0.55000	1.57213	0.61230
10	3	2	0	104	32.6923	0.15458	0.15458	0.16797	0.23488	0.17666	0.16263	0.16909	4.87981	0.70529	1.55288	0.63510
11	3	3	0	72	31.9444	0.12593	0.12593	0.14849	0.13995	0.13818	0.18070	0.16726	4.53056	0.59653	1.44375	0.62361
12	3	4	0	73	15.0685	0.14241	0.14241	0.15007	0.15286	0.18793	0.19251	0.16168	4.75890	0.60205	1.57123	0.61233
13	3	5	0	92	0.0000	0.09582	0.09582	0.08930	0.10846	0.10255	0.16656	0.14603	3.86848	0.43478	1.33533	0.69130
14	4	1	0	99	40.4040	0.08636	0.08636	0.10501	0.11002	0.10955	.	0.10069	3.83838	0.42677	1.22778	0.69293
15	4	2	0	85	38.8235	0.06619	0.06619	0.07596	0.08569	0.08546	.	0.09288	3.30706	0.37412	1.18412	0.70824
16	4	3	0	119	15.1261	0.06024	0.06024	0.07224	0.07114	0.09327	.	0.09830	3.21933	0.24454	1.20210	0.82647
17	4	4	0	83	14.4578	0.06932	0.06932	0.08684	0.09362	0.09917	.	0.12221	3.47229	0.28675	1.26687	0.85602
18	4	5	0	112	0.0000	0.04855	0.04855	0.05231	0.05438	0.09792	.	0.08987	2.81161	0.19955	1.05313	0.80804

OBS RAD0591 STMLN91 CRNHT91 CRNTP91 STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92 STAT93 DBH93 HRT93

1	0.13077	40.4038	14.4808	40.4038	0	7.06364	1.97273	1.49091	0.25000	0.14545	40.3636	19.3636	40.3636	0	7.51000	2.07000
2	0.12455	39.3455	15.3455	39.3455	0	7.04545	1.67727	1.59091	0.23636	0.10455	40.8182	17.3636	40.8182	0	7.39000	1.57500
3	0.10806	37.2581	15.7903	37.2581	0	6.23077	1.52308	1.54615	0.16923	0.08462	39.0769	21.1538	39.0769	0	5.85833	1.37917
4	0.12278	41.2889	17.5778	41.2889	0	6.86875	1.58750	1.31250	0.21563	0.10000	43.3750	23.3750	43.3750	0	7.21250	1.68750
5	0.12330	34.1364	12.0455	34.1364	0	5.41250	1.52188	0.97813	0.15000	0.08125	34.0000	11.5000	34.0000	0	6.30667	1.63333
6	0.07927	35.1545	13.3008	35.1545	0	5.68571	1.37857	1.02857	0.15000	0.06667	36.4762	14.1429	36.4762	0	5.32632	1.40263
7	0.09863	37.0000	13.3151	37.0000	0	6.10000	1.48929	1.17500	0.19643	0.09286	36.9286	12.7857	37.1429	0	6.43333	1.65000
8	0.10065	33.7013	12.7662	33.7013	0	5.24667	1.42667	1.07000	0.21667	0.09667	33.2000	12.4000	32.2667	0	4.99375	1.08750
9	0.29754	25.6885	4.5574	25.6885	0	5.87692	0.81154	1.80000	0.60769	0.26923	29.9231	5.4615	29.9231	0	4.60000	0.57500
10	0.31346	26.6923	5.2115	26.6923	0	5.26190	1.00000	1.35000	0.63810	0.30238	28.2381	5.4286	28.2381	0	6.18571	1.02619
11	0.31667	25.4722	4.4306	25.4722	0	4.90000	0.74667	1.43000	0.60333	0.28667	25.6000	4.3333	25.6000	0	4.84000	0.71667
12	0.30274	26.4521	4.3973	26.4521	0	4.96000	0.79333	1.59333	0.63000	0.28333	28.0000	5.1333	28.0000	0	4.96667	0.62000
13	0.35054	21.6739	3.5978	21.6739	0	3.77895	0.49211	1.26842	0.59474	0.28684	21.3158	3.5263	21.3158	0	4.20526	0.40789
14	0.33333	24.2020	4.3434	24.2020	0	4.21000	0.50250	1.37250	0.57750	0.26250	24.6000	5.3000	24.6000	0	4.41500	0.59250
15	0.32176	19.5176	3.2000	19.5176	0	3.61765	0.45588	1.14412	0.64118	0.29118	20.8824	3.3529	20.8824	0	3.78824	0.42941
16	0.39118	17.9748	2.8824	17.9748	0	3.52917	0.39375	1.20625	0.78958	0.36667	18.8333	3.5833	18.7500	0	3.42500	0.37521
17	0.40964	17.7831	2.4337	17.7831	0	3.87647	0.44412	1.35000	0.91176	0.42353	19.4118	2.3529	19.4118	0	4.05294	0.47647
18	0.38571	14.9821	1.9018	14.9821	0	2.98261	0.29348	1.08478	0.81087	0.36522	15.1739	2.1304	15.1739	0	3.05217	0.26522

status =0

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OBS	SAP93	RAD1093	RAD0593	STMLN93	CRNHT93	CRNTP93	STAT94	DBH94	HRT94	SAP94	RAD1094	RAD0594	STMLN94	CRNHT94	CRNTP94
1	1.64500	0.19000	0.09500	40.5000	16.9000	39.9000	0	7.14000	1.97500	1.59000	0.35000	0.18000	40.7000	20.1000	40.7000
2	1.38000	0.22000	0.10500	41.3000	14.9000	41.2000	0	7.55000	1.59500	1.51500	0.31500	0.18000	42.1000	18.7000	42.1000
3	1.14167	0.19583	0.09167	36.0000	16.9167	36.0000	0	6.79167	1.50417	1.44167	0.25833	0.12917	38.7500	20.7500	38.7500
4	1.49375	0.22500	0.10000	42.0000	22.1875	42.0000	0	6.68235	1.33824	1.52647	0.24118	0.11176	40.2353	20.6471	40.2353
5	1.11000	0.20667	0.10000	36.2000	12.7333	36.2000	0	5.43333	1.33333	0.98333	0.20000	0.10000	33.2667	16.1333	32.9333
6	1.00000	0.15000	0.06842	34.9474	14.2105	34.9474	0	5.83684	1.55263	0.93158	0.20789	0.09474	36.6842	19.7368	35.6842
7	1.07667	0.17667	0.08000	37.2667	16.2667	37.2667	0	6.87333	1.62333	1.14333	0.19667	0.09333	38.0667	19.2000	38.0667
8	1.03438	0.16563	0.07188	33.1875	16.2500	33.1875	0	5.49333	1.27667	0.95000	0.17000	0.08000	36.0000	19.6000	36.0000
9	1.34167	0.45000	0.23333	23.4167	4.3333	23.4167	0	5.11667	0.68750	1.48750	0.45833	0.20000	27.4167	7.1667	27.4167
10	1.61667	0.55714	0.24286	30.3333	5.2381	30.3333	0	5.37619	0.84524	1.38095	0.46905	0.19881	26.7619	8.0000	26.4286
11	1.35000	0.53333	0.22667	25.8000	5.0667	25.8000	0	4.75000	0.72500	1.31786	0.54286	0.24286	26.5000	6.3571	26.5000
12	1.56333	0.60333	0.30000	27.0000	5.0000	27.0000	0	5.62000	0.84667	1.62000	0.55667	0.24333	29.2667	7.7333	29.2333
13	1.44737	0.62368	0.27632	21.5789	3.3158	21.5789	0	4.05000	0.44444	1.33889	0.57500	0.28889	21.8889	5.6111	21.8889
14	1.39500	0.58500	0.25750	25.3000	4.9500	25.3000	0	4.31500	0.65250	1.15750	0.45000	0.18750	24.8500	7.0500	24.4500
15	1.17647	0.56176	0.25294	20.5294	3.7059	20.5294	0	3.77500	0.55000	1.11875	0.48438	0.20625	20.8125	5.5625	19.6875
16	1.18333	0.75833	0.34375	18.1667	3.0000	18.6250	0	4.01200	0.50000	1.27200	0.69800	0.30600	20.6000	5.4800	20.3200
17	1.32059	0.83235	0.39118	18.8235	3.1176	18.8235	0	4.21765	0.47059	1.40000	0.69706	0.30588	20.1176	4.7059	20.0882
18	1.01087	0.75652	0.34565	15.1304	2.1739	15.1304	0	3.95909	0.32727	1.27273	0.68864	0.30227	18.1818	4.2273	18.1818

OBS	STAT95	DBH95	HRT95	SAP95	RAD0595	RAD1095	STMLN95	CRNHT95	CRNTP95	STAT97	DBH97	SAP97	HRT97	RAD0597	RAD1097	STMLN97
1	0	7.77000	2.08500	1.70500	0.15500	0.31000	37.5000	37.5000	19.1000	0	7.48000	1.47500	1.73500	0.11300	0.16900	43.1000
2	0	7.47000	1.49500	1.92000	0.13000	0.24500	38.4600	37.9600	20.8000	0	7.11000	1.34500	1.75500	0.08050	0.13500	40.5000
3	0	6.20833	1.45417	1.22917	0.13750	0.24583	37.3833	37.3833	22.7500	0	6.21818	0.98182	1.29545	0.04750	0.09050	39.6364
4	0	7.14375	1.39688	1.60938	0.18750	0.32500	38.8125	38.8688	23.7000	0	7.46000	1.36667	1.49000	0.07600	0.13900	45.4000
5	0	6.26000	1.08333	1.60000	0.29000	0.44667	34.5467	54.5600	17.8400	0	5.69375	1.02188	1.37500	0.05154	0.10154	35.2500
6	0	6.14118	0.99722	1.39444	0.23611	0.37222	36.9706	36.9706	21.8176	0	5.83158	1.06316	1.46842	0.05353	0.08676	35.7368
7	0	6.96000	1.22667	1.82000	0.23333	0.33333	35.6000	35.6000	18.3400	0	6.62143	1.11786	1.61429	0.04545	0.07955	37.7857
8	0	5.74000	1.12667	1.26667	0.24667	0.36667	33.4000	33.4000	17.5533	0	5.31250	0.99375	1.37500	0.04438	0.08906	34.3750
9	0	5.35000	1.57500	0.90417	0.35417	0.60000	27.7500	27.7500	5.2500	0	5.72500	0.98750	1.47500	0.08375	0.19750	28.4167
10	0	5.04762	1.32619	1.09762	0.33095	0.57619	26.7619	26.7143	5.6190	0	5.14500	1.01750	1.11750	0.11625	0.25625	28.1000
11	0	5.58462	1.41538	0.93462	0.33846	0.59615	28.9231	28.6154	5.9231	0	5.34667	1.34667	0.99000	0.10167	0.23433	27.9333
12	0	5.44286	1.43571	0.94286	0.37143	0.66071	28.7857	28.7857	5.8571	0	5.21429	1.06071	1.23214	0.09286	0.21857	29.3571
13	0	5.30000	1.27632	1.05263	0.40526	0.75526	26.4211	26.4211	4.7368	0	4.85789	1.25526	0.85526	0.10158	0.24053	26.1579
14	.	.	.	.	.	.	.	.	.	0	4.17895	0.73684	1.08947	0.08605	0.21842	26.7368
15	.	.	.	.	.	.	.	.	.	0	3.96471	0.87059	0.86176	0.07971	0.19563	20.9412
16	.	.	.	.	.	.	.	.	.	0	4.16400	0.80800	0.97000	0.11780	0.28720	21.9200
17	0	4.63125	1.28125	0.85938	0.13313	0.32563	21.3125
18	0	3.94348	1.03696	0.65435	0.11870	0.29848	19.5652

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3

status =0

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OBS CRNTP97 CRNHT97 SAP_BA91 SAP_BA92 SAP_BA93 SAP_BA94 SAP_BA95 SAP_BA97 CSAPBA92 CSAPBA93 CSAPBA94 CSAPBA95 CSAPBA97 N_92

1	43.1000	23.1000	0.17526	0.15462	0.14739	0.15842	0.14545	0.17744	-15.1118	-15.0220	-12.4676	-13.4210	0.2046	11
2	35.2000	19.7000	0.13448	0.11158	0.17905	0.13743	0.15760	0.10891	-10.1160	6.8929	-4.7288	8.2368	-18.1792	11
3	40.5455	23.8182	0.11874	0.10266	0.10593	0.15045	0.10650	0.11297	-20.9069	0.2002	2.3701	-11.9188	5.4239	13
4	42.1333	25.0667	0.14117	0.13168	0.15193	0.14066	0.16150	0.15482	6.4375	-8.7158	6.2023	16.3275	-0.0610	16
5	32.4375	18.3125	0.10338	0.08768	0.12975	0.11681	0.13505	0.08404	-7.4955	1.6774	13.4399	26.7624	-0.3873	16
6	35.6842	20.7368	0.08170	0.09696	0.09047	0.09282	0.12985	0.08042	7.8444	-0.2361	-0.0695	35.6154	-12.4498	21
7	37.7857	19.8571	0.10283	0.08580	0.09805	0.11481	0.13535	0.09495	-6.4905	-6.0013	2.2123	33.3220	-4.5402	14
8	34.3750	19.0000	0.08295	0.06427	0.08885	0.08483	0.08881	0.06146	-18.9418	3.5445	2.9209	13.3264	-20.0818	15
9	28.0833	9.3333	0.10529	0.13117	0.07546	0.07782	0.06079	0.07575	-6.4343	-6.0247	-5.8965	-76.3417	-39.4007	13
10	28.1000	11.1000	0.11442	0.10462	0.14580	0.09787	0.06441	0.08023	-16.4836	-5.8508	-5.1248	-52.6247	-37.2076	21
11	26.8667	9.7333	0.09081	0.09817	0.08256	0.08052	0.06831	0.07730	-2.1844	-6.4908	-6.0824	-46.9318	-17.9121	15
12	29.3571	9.7143	0.10729	0.09563	0.10987	0.11412	0.05913	0.07020	-6.1854	-2.3710	-9.7140	-57.3245	-32.7258	15
13	26.1579	7.7895	0.07452	0.05097	0.07300	0.06379	0.06248	0.06905	-8.2177	-0.7664	-1.2834	-37.5903	-21.5748	19
14	24.1053	10.1579	0.05951	0.06612	0.06225	0.04824	.	0.03000	-3.0220	-7.9124	-9.7863	.	-56.8474	20
15	16.4706	6.9412	0.05553	0.05136	0.06475	0.04561	.	0.03975	-4.6661	-0.6540	-10.6230	.	-32.6994	17
16	21.3600	6.4400	0.04710	0.04305	0.04292	0.04225	.	0.02256	-4.6178	-5.9469	-10.7376	.	-66.4673	24
17	19.9375	6.0625	0.05339	0.04696	0.04809	0.05093	.	0.03957	-6.3650	-8.2334	-5.7093	.	-31.8463	17
18	19.5652	5.3043	0.03790	0.02971	0.02853	0.05617	.	0.02936	-3.9670	-4.9354	-3.0909	.	-31.7609	23

OBS N_93 N_94 N_95 N_97 TREAT T_TREES HEC ACRE QMD90 QMD91 QMD92 QMD93 QMD94 QMD95 QMD97 T_DEN T_BA90

1	10	10	10	10	1	52	0.060703	0.15	7.19466	7.19466	7.10294	7.60677	7.18874	7.85538	7.51465	346.667	97.869
2	10	10	10	10	3	55	0.060703	0.15	7.11771	7.11771	7.10192	7.43055	7.57516	7.49313	7.12482	366.667	101.314
3	12	12	12	11	4	62	0.040469	0.10	6.22369	6.22369	6.28711	5.94734	6.82306	6.32014	6.35195	620.000	130.979
4	16	17	16	15	5	90	0.060703	0.15	6.93778	6.93778	6.97769	7.28569	6.76600	7.31330	7.49075	600.000	157.510
5	15	15	15	16	3	88	0.060703	0.15	5.80980	5.80980	5.57875	6.47858	5.54214	6.35584	5.81620	586.667	108.001
6	19	19	17	19	5	123	0.060703	0.15	5.59514	5.59514	5.77350	5.51276	5.91194	6.20114	5.98797	820.000	140.007
7	15	15	15	14	1	73	0.060703	0.15	6.49797	6.49797	6.13514	6.49774	6.92286	7.05663	6.69269	486.667	112.073
8	16	15	15	16	4	77	0.040469	0.10	5.34108	5.34108	5.29497	5.03593	5.54545	5.82208	5.36808	770.000	119.802
9	12	12	12	12	2	61	0.060703	0.15	5.22549	5.22549	6.09792	4.96471	5.39846	5.64491	6.05358	406.667	60.563
10	21	21	21	20	5	104	0.060703	0.15	5.32374	5.32374	5.54956	6.56241	5.69130	5.46068	5.56808	693.333	107.174
11	15	14	13	15	3	72	0.060703	0.15	4.80512	4.80512	5.21785	5.06557	5.03339	5.75593	5.53787	480.000	60.446
12	15	15	14	14	4	73	0.060703	0.15	5.10994	5.10994	5.24557	5.29408	5.86998	5.94114	5.44466	486.667	69.307
13	19	18	19	19	1	92	0.060703	0.15	4.19144	4.19144	4.04631	4.45935	4.33622	5.52616	5.17438	613.333	58.768
14	20	20	0	19	5	99	0.060703	0.15	3.97934	3.97934	4.38794	4.49138	4.48180	.	4.29676	660.000	57.001
15	17	16	0	17	3	85	0.060703	0.15	3.48369	3.48369	3.73198	3.96366	3.95854	.	4.12681	566.667	37.508
16	24	25	0	25	4	119	0.060703	0.15	3.32332	3.32332	3.63931	3.61167	4.13546	.	4.24542	793.333	47.788
17	17	17	0	16	2	83	0.060703	0.15	3.56523	3.56523	3.99021	4.14310	4.26415	.	4.73372	553.333	38.360
18	23	22	0	23	1	112	0.060703	0.15	2.98345	2.98345	3.09684	3.15774	4.23712	.	4.05929	746.667	36.248

status =0

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OBS	T_BA91	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93	T_SPBA94	T_SPBA95	T_SPBA97
1	97.869	95.390	109.403	97.709	116.671	106.769	60.7565	53.6019	51.095	54.9197	50.422	61.5127
2	101.314	100.864	110.415	114.755	112.283	101.516	49.3107	40.9141	65.653	50.3910	57.786	39.9340
3	130.979	133.662	119.606	157.422	135.070	136.433	73.6165	63.6499	65.677	93.2809	66.032	70.0427
4	157.510	159.327	173.703	149.807	175.022	183.619	84.6999	79.0060	91.157	84.3971	96.898	92.8947
5	108.001	99.582	134.297	98.279	129.256	108.239	60.6525	51.4369	76.120	68.5286	79.230	49.3011
6	140.007	149.076	135.915	156.311	171.978	160.357	66.9940	79.5086	74.183	76.1135	106.480	65.9449
7	112.073	99.907	112.065	127.209	132.173	118.891	50.0434	41.7575	47.719	55.8726	65.872	46.2110
8	119.802	117.742	106.504	129.145	142.352	121.016	63.8745	49.4879	68.416	65.3203	68.383	47.3266
9	60.563	82.474	54.669	64.639	70.675	81.279	42.8183	53.3436	30.687	31.6466	24.721	30.8056
10	107.174	116.459	162.849	122.484	112.759	117.238	79.3310	72.5334	101.090	67.8552	44.655	55.6250
11	60.446	71.275	67.176	66.325	86.734	80.286	43.5895	47.1226	39.628	38.6517	32.786	37.1064
12	69.307	73.035	74.392	91.458	93.689	78.684	52.2159	46.5419	53.470	55.5382	28.778	34.1644
13	58.768	54.768	66.520	62.898	102.155	89.563	45.7071	31.2645	44.775	39.1268	38.323	42.3492
14	57.001	69.307	72.614	72.304	.	66.457	39.2793	43.6384	41.084	31.8388	.	19.7999
15	37.508	43.045	48.555	48.430	.	52.635	31.4692	29.1025	36.689	25.8471	.	22.5232
16	47.788	57.307	56.440	73.998	.	77.985	37.3654	34.1550	34.048	33.5157	.	17.8993
17	38.360	48.050	51.803	54.874	.	67.625	29.5400	25.9857	26.609	28.1817	.	21.8966
18	36.248	39.055	40.606	73.111	.	67.103	28.2950	22.1835	21.305	41.9430	.	21.9215

```

title ' status =1';
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
  if grd_tree<2 ;
grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
if stat92=1;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
if stat93=1;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
if stat94=1;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
if stat95=1;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
if stat97=1;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

```

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```
proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
```

```
data mean; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre=.10;
if block=1 and plot=3 then acre=.10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```


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The SAS System

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NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.

NOTE: SAS (r) Proprietary Software Release 6.12 TS045

Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:

real time	0.19 seconds
cpu time	0.10 seconds

NOTE: DM statements are only valid in DMS mode.

NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1      title ' status =1';
2      options ls=132 ps=55;
3      data t90; infile '90.dat' firstobs=2 delimiter=',' missover;
4      input block plot tag east north crown dbh90 rank grd_tree girdle;
5      if grd_tree<2 ;
6      grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.

The minimum record length was 20.

The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:

real time	0.35 seconds
cpu time	0.17 seconds

```
7      proc sort; by block plot tag;
```

:1.log

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The SAS System

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NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: PROCEDURE SORT used:

real time	0.24 seconds
cpu time	0.06 seconds

```
3      data t91; infile '91.dat' firstobs=2 delimiter=',' missover;
4      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
10     CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.
The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.33 seconds
cpu time	0.16 seconds

```
11     proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.22 seconds
cpu time	0.08 seconds

```
12     data t92; infile '92.dat' firstobs=2 delimiter=',' missover;
13     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
14     if stat92=1;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.
The maximum record length was 54.

NOTE: The data set WORK.T92 has 9 observations and 12 variables.

NOTE: DATA statement used:

real time	0.15 seconds
cpu time	0.05 seconds

3

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15 proc sort; by block plot tag;

NOTE: The data set WORK.T92 has 9 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.11 seconds
cpu time	0.01 seconds

```
16       data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
17       input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
18       sap93=sap93/20; rad1093=rad1093/20;rad0593=rad0593/20; hrt93=hrt93/20;
19       if stat93=1;
20       drop stat92x;
```

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 5 observations and 12 variables.

NOTE: DATA statement used:

real time	0.16 seconds
cpu time	0.06 seconds

21 proc sort; by block plot tag;

NOTE: The data set WORK.T93 has 5 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.11 seconds
cpu time	0.01 seconds

```
22       data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
23       input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
24       sap94=sap94/20; rad1094=rad1094/20;rad0594=rad0594/20; hrt94=hrt94/20;
25       if stat94=1;
26       drop stat93x;
```

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 24:12 3 at 24:32 3 at 24:51 3 at 24:67

NOTE: The data set WORK.T94 has 4 observations and 12 variables.

NOTE: DATA statement used:

real time 0.15 seconds

cpu time 0.06 seconds

27 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 4 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.12 seconds

cpu time 0.01 seconds

28 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
29 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
30 sap95=sap95/20; rad1095=rad1095/20;rad0595=rad0595/20; hrt95=hrt95/20;
31 if stat95=1;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 3 observations and 12 variables.

NOTE: DATA statement used:

real time 0.15 seconds

cpu time 0.05 seconds

32 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 3 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.11 seconds

cpu time 0.00 seconds

33 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
34 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNHT97;
35 sap97=sap97/20; rad1097=rad1097/20;rad0597=rad0597/20; hrt97=hrt97/20;
36 if stat97=1;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,

Owner Name=zumbrunn,Group Name=ACD0003,

Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 35:12 11 at 35:32 10 at 35:51 8 at 35:67

NOTE: The data set WORK.T97 has 5 observations and 12 variables.

NOTE: DATA statement used:

real time 0.15 seconds

cpu time 0.06 seconds

37 proc sort; by block plot tag;

38

NOTE: The data set WORK.T97 has 5 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.12 seconds

cpu time 0.01 seconds

39 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

40 if tag;

41 ba90 = (dbh90**2)* .005454;

42 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

43 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

44 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

45

46 woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

47 woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

48 woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

49 woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

50 woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

51 woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

52

53 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

54 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

55 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

56 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

57 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

58

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

1511 at 42:42 1511 at 42:46 1515 at 43:14 1515 at 43:18 1519 at 43:42 1519 at 43:46 1517 at 44:14

1517 at 44:18 1515 at 44:42 1515 at 44:46 1511 at 47:47 1511 at 47:54 1511 at 47:58 1511 at 47:84

1515 at 48:47 1515 at 48:54 1515 at 48:58 1515 at 48:84 1519 at 49:47 1519 at 49:54 1519 at 49:58

1519 at 49:84 1517 at 50:47 1517 at 50:54 1517 at 50:84 1517 at 50:84 1515 at 51:47 1515 at 51:54

1515 at 51:58 1515 at 51:84 1511 at 53:19 1511 at 53:29 1511 at 53:38 1515 at 54:19 1515 at 54:29

1515 at 54:38 1519 at 55:19 1519 at 55:29 1519 at 55:38 1517 at 56:19 1517 at 56:29 1517 at 56:38

1515 at 57:19 1515 at 57:29 1515 at 57:38

NOTE: The data set WORK.ALL has 1520 observations and 93 variables.

NOTE: DATA statement used:

real time	3.45 seconds
cpu time	1.07 seconds

```
59      proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
60      sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
61      output out=mean mean=
62      n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
63
```

NOTE: The data set WORK.MEAN has 18 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.23 seconds
cpu time	0.10 seconds

```
64      data mean; set mean;
65      if block=1 and plot=1 then treat=1;
66      if block=1 and plot=2 then treat=3;
67      if block=1 and plot=3 then treat=4;
68      if block=1 and plot=4 then treat=5;
69      if block=2 and plot=1 then treat=3;
70      if block=2 and plot=2 then treat=5;
71      if block=2 and plot=3 then treat=1;
72      if block=2 and plot=4 then treat=4;
73      if block=3 and plot=1 then treat=2;
74      if block=3 and plot=2 then treat=5;
75      if block=3 and plot=3 then treat=3;
76      if block=3 and plot=4 then treat=4;
77      if block=3 and plot=5 then treat=1;
78      if block=4 and plot=1 then treat=5;
79      if block=4 and plot=2 then treat=3;
80      if block=4 and plot=3 then treat=4;
81      if block=4 and plot=4 then treat=2;
82      if block=4 and plot=5 then treat=1;
83      t_trees = _freq_;
84      hec= .15 * .404686;
85      acre=.15;
86      if block=2 and plot=4 then hec= .10 * .404686;
87      if block=1 and plot=3 then hec= .10 * .404686;
88      if block=2 and plot=4 then acre=.10;
89      if block=1 and plot=3 then acre=.10;
90
91      qmd90=sqrt(ba90/.005454);
92      qmd91=sqrt(ba91/.005454);
93      qmd92=sqrt(ba92/.005454);
94      qmd93=sqrt(ba93/.005454);
95      qmd94=sqrt(ba94/.005454);
96      qmd95=sqrt(ba95/.005454);
97      qmd97=sqrt(ba97/.005454);
98
```

```
99      t_den= t_trees/acre;
100
101      t_ba90=t_trees*ba90/acre;
102      t_ba91=t_trees*ba91/acre;
103      t_ba92=t_trees*ba92/acre;
104      t_ba93=t_trees*ba93/acre;
105      t_ba94=t_trees*ba94/acre;
106      t_ba95=t_trees*ba95/acre;
107      t_ba97=t_trees*ba97/acre;
108
109      t_spba91=t_trees*sap_ba91/acre;
110      t_spba92=t_trees*sap_ba92/acre;
111      t_spba93=t_trees*sap_ba93/acre;
112      t_spba94=t_trees*sap_ba94/acre;
113      t_spba95=t_trees*sap_ba95/acre;
114      t_spba97=t_trees*sap_ba97/acre;
115
```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

12 at 93:7	12 at 93:16	15 at 94:7	15 at 94:16	17 at 95:7	17 at 95:16	15 at 96:7	15 at 96:16
15 at 97:7	15 at 97:16	12 at 103:15	12 at 103:20	15 at 104:15	15 at 104:20	17 at 105:15	17 at 105:20
15 at 106:15	15 at 106:20	15 at 107:15	15 at 107:20	12 at 110:17	12 at 110:26	15 at 111:17	15 at 111:26
17 at 112:17	17 at 112:26	15 at 113:17	15 at 113:26	15 at 114:17	15 at 114:26		

NOTE: The data set WORK.MEAN has 18 observations and 106 variables.

NOTE: DATA statement used:

real time	0.21 seconds
cpu time	0.09 seconds

```
116      proc print;
```

NOTE: The PROCEDURE PRINT printed pages 1-4.

NOTE: PROCEDURE PRINT used:

real time	0.12 seconds
cpu time	0.07 seconds

NOTE: The SAS System used:

real time	6.76 seconds
cpu time	2.24 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414


```
status =1
```

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OBS SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93 STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94 STAT95

[illegible]

OBS DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95 STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97

[illegible]

c1.1st Mon Oct 26 07:32:52 1998

3

status =1

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OBS CRNHT97 SAP_BA91 SAP_BA92 SAP_BA93 SAP_BA94 SAP_BA95 SAP_BA97 CSAPBA92 CSAPBA93 CSAPBA94 CSAPBA95 CSAPBA97 N_92 N_93

1	.	0.17526	.	.	.	.	.	.	.	.	.	.	0	0
2	.	0.13448	0.11254	.	.	.	.	-0.0568	.	.	.	.	2	0
3	22.3333	0.11874	0.08835	0.080283	0.058194	0.10663	0.14357	-24.0150	-30.9568	-49.9531	-8.3021	-2.7211	1	1
4	20.0000	0.14117	0.21132	0.070193	.	.	0.15577	17.4209	-67.2269	.	.	-8.9286	2	1
5	.	0.10338	0.10014	.	.	.	.	-26.8817	.	.	.	.	1	0
6	.	0.08170	0.03297	.	.	0.14939	.	-55.6545	.	.	28.0505	.	2	0
7	.	0.10283	.	.	.	.	.	.	.	.	.	.	0	0
8	.	0.08295	.	.	.	.	.	.	.	.	.	.	0	0
9	.	0.10529	.	.	.	.	.	.	.	.	.	.	0	0
10	.	0.11442	.	.	.	.	.	.	.	.	.	.	0	0
11	.	0.09081	.	.	.	0.03142	.	.	.	.	-10.0000	.	0	0
12	.	0.10729	.	.	.	.	.	.	.	.	.	.	0	0
13	.	0.07452	.	.	.	.	.	.	.	.	.	.	0	0
14	13.0000	0.05951	.	.	.	.	0.04500	.	.	.	.	-23.6818	0	0
15	.	0.05553	0.01571	0.018125	.	.	.	2.8571	-3.2764	.	.	.	1	3
16	.	0.04710	.	.	.	.	.	.	.	.	.	.	0	0
17	.	0.05339	.	.	.	.	.	.	.	.	.	.	0	0
18	.	0.03790	.	.	.	.	.	.	.	.	.	.	0	0

OBS N_94 N_95 N_97 TREAT T_TREES HEC ACRE QMD90 QMD91 QMD92 QMD93 QMD94 QMD95 QMD97 T_DEN T_BA90 T_BA91

1	0	0	0	1	52	0.060703	0.15	7.19466	7.19466	.	.	.	.	346.667	97.869	97.869
2	0	0	0	3	55	0.060703	0.15	7.11771	7.11771	7.14493	.	.	.	366.667	101.314	101.314
3	1	1	3	4	62	0.040469	0.10	6.22369	6.22369	6.30000	6.20000	6.3	6.2	6.67932	620.000	130.979
4	0	0	1	5	90	0.060703	0.15	6.93778	6.93778	8.77411	9.00000	.	.	7.30000	600.000	157.510
5	0	0	0	3	88	0.060703	0.15	5.80980	5.80980	6.00000	.	.	.	.	586.667	108.001
6	0	1	0	5	123	0.060703	0.15	5.59514	5.59514	5.80000	.	.	7.0	.	820.000	140.007
7	0	0	0	1	73	0.060703	0.15	6.49797	6.49797	.	.	.	.	.	486.667	112.073
8	0	0	0	4	77	0.040469	0.10	5.34108	5.34108	.	.	.	.	.	770.000	119.802
9	0	0	0	2	61	0.060703	0.15	5.22549	5.22549	.	.	.	.	.	406.667	60.563
10	0	0	0	5	104	0.060703	0.15	5.32374	5.32374	.	.	.	.	.	693.333	107.174
11	0	1	0	3	72	0.060703	0.15	4.80512	4.80512	.	.	.	3.5	.	480.000	60.446
12	0	0	0	4	73	0.060703	0.15	5.10994	5.10994	.	.	.	.	.	486.667	69.307
13	0	0	0	1	92	0.060703	0.15	4.19144	4.19144	.	.	.	.	.	613.333	58.768
14	0	0	1	5	99	0.060703	0.15	3.97934	3.97934	.	.	.	.	3.60000	660.000	57.001
15	0	0	0	3	85	0.060703	0.15	3.48369	3.48369	1.90000	2.49600	.	.	.	566.667	37.508
16	0	0	0	4	119	0.060703	0.15	3.32332	3.32332	.	.	.	.	.	793.333	47.788
17	0	0	0	2	83	0.060703	0.15	3.56523	3.56523	.	.	.	.	.	553.333	38.360
18	0	0	0	1	112	0.060703	0.15	2.98345	2.98345	.	.	.	.	.	746.667	36.248

						status =1						
OBS	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93	T_SPBA94	T_SPBA95	T_SPBA97	
1	.	.	.	.	.	60.7565	.	.	.	.	.	.
2	102.090	.	.	.	.	49.3107	41.266	.	.	.	.	.
3	134.211	129.984	134.211	129.984	150.859	73.6165	54.780	49.7754	36.0804	66.108	89.0118	.
4	251.926	265.064	.	.	174.386	84.6999	126.789	42.1158	.	.	93.4597	.
5	115.188	.	.	.	.	60.6525	58.746	.	.	.	.	.
6	150.447	.	.	219.142	.	66.9940	27.035	.	.	122.496	.	.
7	.	.	.	.	.	50.0434	.	.	.	.	.	.
8	.	.	.	.	.	63.8745	.	.	.	.	.	.
9	.	.	.	.	.	42.8183	.	.	.	.	.	.
10	.	.	.	.	.	79.3310	.	.	.	.	.	.
11	.	.	.	32.070	.	43.5895	.	.	.	15.079	.	.
12	.	.	.	.	.	52.2159	.	.	.	.	.	.
13	.	.	.	.	.	45.7071	.	.	.	.	.	.
14	.	.	.	.	46.651	39.2793	.	.	.	.	29.6970	.
15	11.157	19.254	.	.	.	31.4692	8.901	10.2711	.	.	.	.
16	.	.	.	.	.	37.3654	.	.	.	.	.	.
17	.	.	.	.	.	29.5400	.	.	.	.	.	.
18	.	.	.	.	.	28.2950	.	.	.	.	.	.

```

title ' status =2';
options ls=132 ps=55;
data t90; infile '90.dat' firstobs=2 delimiter=', ' missover;
input block plot tag east north crown dbh90 rank grd_tree girdle;
  if grd_tree<2 ;
grd_tree=grd_tree*100;
proc sort; by block plot tag;
data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
input block plot tag          DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
CRNTP91=STMLN91; drop CRNWD91;
proc sort; by block plot tag;
data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
if stat92=2;
proc sort; by block plot tag;
data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
if stat93=2;
drop stat92x;
proc sort; by block plot tag;
data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
if stat94=2;
drop stat93x;
proc sort; by block plot tag;
data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
if stat95=2;
proc sort; by block plot tag;
data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
if stat97=2;
proc sort; by block plot tag;

data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;
if tag;
ba90 = (dbh90**2)* .005454;
ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;
ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;
ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;
woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;
woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;
woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;
woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;
woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;
csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;
csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;
csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;
csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

```

```
proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
  sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
  output out=mean mean=
    n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;
```

```
data mean; set mean;
if block=1 and plot=1 then treat=1;
if block=1 and plot=2 then treat=3;
if block=1 and plot=3 then treat=4;
if block=1 and plot=4 then treat=5;
if block=2 and plot=1 then treat=3;
if block=2 and plot=2 then treat=5;
if block=2 and plot=3 then treat=1;
if block=2 and plot=4 then treat=4;
if block=3 and plot=1 then treat=2;
if block=3 and plot=2 then treat=5;
if block=3 and plot=3 then treat=3;
if block=3 and plot=4 then treat=4;
if block=3 and plot=5 then treat=1;
if block=4 and plot=1 then treat=5;
if block=4 and plot=2 then treat=3;
if block=4 and plot=3 then treat=4;
if block=4 and plot=4 then treat=2;
if block=4 and plot=5 then treat=1;
t_trees = _freq_;
hec= .15 * .404686;
acre=.15;
if block=2 and plot=4 then hec= .10 * .404686;
if block=1 and plot=3 then hec= .10 * .404686;
if block=2 and plot=4 then acre=.10;
if block=1 and plot=3 then acre=.10;
```

```
qmd90=sqrt(ba90/.005454);
qmd91=sqrt(ba91/.005454);
qmd92=sqrt(ba92/.005454);
qmd93=sqrt(ba93/.005454);
qmd94=sqrt(ba94/.005454);
qmd95=sqrt(ba95/.005454);
qmd97=sqrt(ba97/.005454);
```

```
t_den= t_trees/acre;
```

```
t_ba90=t_trees*ba90/acre;
t_ba91=t_trees*ba91/acre;
t_ba92=t_trees*ba92/acre;
t_ba93=t_trees*ba93/acre;
t_ba94=t_trees*ba94/acre;
t_ba95=t_trees*ba95/acre;
t_ba97=t_trees*ba97/acre;
```

```
t_spba91=t_trees*sap_ba91/acre;
t_spba92=t_trees*sap_ba92/acre;
t_spba93=t_trees*sap_ba93/acre;
t_spba94=t_trees*sap_ba94/acre;
t_spba95=t_trees*sap_ba95/acre;
t_spba97=t_trees*sap_ba97/acre;
```

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NOTE: Copyright (c) 1989-1996 by SAS Institute Inc., Cary, NC, USA.
NOTE: SAS (r) Proprietary Software Release 6.12 TS045
 Licensed to COLORADO STATE UNIVERSITY, ACNS, Site 0009521005.

NOTE: Running on IBM Model RS/6000 Serial Number 000003608000.

Welcome to SAS 6.12 TS-045!! Installed February 1998.

This release includes BASE SAS, AF, ASSIST, ETS, FSP, GRAPH,
IML, INSIGHT, OR, QC, STAT and TUTOR options.

The SAS software is for University use only, and may not be used
for any commerical purposes.

NOTE: AUTOEXEC processing beginning; file is /usr/local/sas612/autoexec.sas.

NOTE: SAS initialization used:
 real time 0.20 seconds
 cpu time 0.11 seconds

NOTE: DM statements are only valid in DMS mode.
NOTE: DM statements are only valid in DMS mode.

NOTE: AUTOEXEC processing completed.

```
1            title ' status =2';  
2            options ls=132 ps=55;  
3            data t90; infile '90.dat' firstobs=2 delimiter=',' missover;  
4            input block plot tag east north crown dbh90 rank grd_tree girdle;  
5            if grd_tree<2 ;  
6            grd_tree=grd_tree*100;
```

NOTE: The infile '90.dat' is:
 File Name=/a/zumbrunn/jobs/jacobi/opt/90.dat,
 Owner Name=zumbrunn,Group Name=ACD0003,
 Access Permission=rw-----,
 File Size (bytes)=46889

NOTE: 1841 records were read from the infile '90.dat'.
 The minimum record length was 20.
 The maximum record length was 27.

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: DATA statement used:
 real time 0.36 seconds
 cpu time 0.15 seconds

7 proc sort; by block plot tag;

NOTE: The data set WORK.T90 has 1520 observations and 10 variables.

NOTE: PROCEDURE SORT used:

real time	0.23 seconds
cpu time	0.06 seconds

```
8      data t91; infile '91.dat' firstobs=2 delimiter=', ' missover;
9      input block plot tag      DBH91 HRT91 SAP91 RAD1091 RAD0591 STMLN91 CRNHT91 CRNWD91;
10     CRNTP91=STMLN91; drop CRNWD91;
```

NOTE: The infile '91.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/91.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=67349

NOTE: 1520 records were read from the infile '91.dat'.

The minimum record length was 41.

The maximum record length was 45.

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: DATA statement used:

real time	0.33 seconds
cpu time	0.17 seconds

```
11     proc sort; by block plot tag;
```

NOTE: The data set WORK.T91 has 1520 observations and 11 variables.

NOTE: PROCEDURE SORT used:

real time	0.22 seconds
cpu time	0.06 seconds

```
12     data t92; infile '92.dat' firstobs=2 delimiter=', ' missover;
13     input block plot tag STAT92 DBH92 HRT92 SAP92 RAD1092 RAD0592 STMLN92 CRNHT92 CRNTP92;
14     if stat92=2;
```

NOTE: The infile '92.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/92.dat,
Owner Name=zumbrunn,Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=18595

NOTE: 341 records were read from the infile '92.dat'.

The minimum record length was 51.

The maximum record length was 54.

NOTE: The data set WORK.T92 has 31 observations and 12 variables.

NOTE: DATA statement used:

real time	0.16 seconds
cpu time	0.07 seconds

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15 proc sort; by block plot tag;

NOTE: The data set WORK.T92 has 31 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.11 seconds
cpu time	0.02 seconds

16 data t93; infile '93.dat' firstobs=2 delimiter=', ' missover;
17 input block plot tag stat92x STAT93 DBH93 HRT93 SAP93 RAD1093 RAD0593 STMLN93 CRNHT93 CRNTP93;
18 sap93=sap93/20; rad1093=rad1093/20; rad0593=rad0593/20; hrt93=hrt93/20;
19 if stat93=2;
20 drop stat92x;

NOTE: The infile '93.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/93.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=12522

NOTE: 325 records were read from the infile '93.dat'.

The minimum record length was 34.

The maximum record length was 40.

NOTE: The data set WORK.T93 has 24 observations and 12 variables.

NOTE: DATA statement used:

real time	0.16 seconds
cpu time	0.07 seconds

21 proc sort; by block plot tag;

NOTE: The data set WORK.T93 has 24 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time	0.11 seconds
cpu time	0.03 seconds

22 data t94; infile '94.dat' firstobs=2 delimiter=', ' missover;
23 input block plot tag stat93x STAT94 DBH94 HRT94 SAP94 RAD1094 RAD0594 STMLN94 CRNHT94 CRNTP94;
24 sap94=sap94/20; rad1094=rad1094/20; rad0594=rad0594/20; hrt94=hrt94/20;
25 if stat94=2;
26 drop stat93x;

NOTE: The infile '94.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/94.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=10653

NOTE: 305 records were read from the infile '94.dat'.

The minimum record length was 29.

The maximum record length was 38.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

3 at 24:12 3 at 24:32 3 at 24:51 3 at 24:67

NOTE: The data set WORK.T94 has 8 observations and 12 variables.

NOTE: DATA statement used:

real time 0.15 seconds
cpu time 0.05 seconds

27 proc sort; by block plot tag;

NOTE: The data set WORK.T94 has 8 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.11 seconds
cpu time 0.02 seconds

28 data t95; infile '95.dat' firstobs=2 delimiter=', ' missover;
29 input block plot tag STAT95 DBH95 HRT95 SAP95 RAD0595 RAD1095 STMLN95 CRNHT95 CRNTP95;
30 sap95=sap95/20; rad1095=rad1095/20; rad0595=rad0595/20; hrt95=hrt95/20;
31 if stat95=2;

NOTE: The infile '95.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/95.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,
File Size (bytes)=7470

NOTE: 196 records were read from the infile '95.dat'.

The minimum record length was 31.

The maximum record length was 42.

NOTE: The data set WORK.T95 has 3 observations and 12 variables.

NOTE: DATA statement used:

real time 0.15 seconds
cpu time 0.03 seconds

32 proc sort; by block plot tag;

NOTE: The data set WORK.T95 has 3 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.10 seconds
cpu time 0.02 seconds

33 data t97; infile '97.dat' firstobs=2 delimiter=', ' missover;
34 input block plot tag STAT97 DBH97 SAP97 HRT97 RAD0597 RAD1097 STMLN97 CRNTP97 CRNHT97;
35 sap97=sap97/20; rad1097=rad1097/20; rad0597=rad0597/20; hrt97=hrt97/20;
36 if stat97=2;

NOTE: The infile '97.dat' is:

File Name=/a/zumbrunn/jobs/jacobi/opt/97.dat,
Owner Name=zumbrunn, Group Name=ACD0003,
Access Permission=rw-----,

File Size (bytes)=11868

NOTE: 304 records were read from the infile '97.dat'.

The minimum record length was 30.

The maximum record length was 39.

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

8 at 35:12 11 at 35:32 10 at 35:51 8 at 35:67

NOTE: The data set WORK.T97 has 8 observations and 12 variables.

NOTE: DATA statement used:

real time 0.14 seconds

cpu time 0.06 seconds

37 proc sort; by block plot tag;

38

NOTE: The data set WORK.T97 has 8 observations and 12 variables.

NOTE: PROCEDURE SORT used:

real time 0.11 seconds

cpu time 0.01 seconds

39 data all; merge t90 t91 t92 t93 t94 t95 t97; by block plot tag;

40 if tag;

41 ba90 = (dbh90**2)* .005454;

42 ba91 = (dbh91**2)* .005454; ba92 = (dbh92**2)* .005454;

43 ba93 = (dbh93**2)* .005454; ba94 = (dbh94**2)* .005454;

44 ba95 = (dbh95**2)* .005454; ba97 = (dbh97**2)* .005454;

45

46 woda91=((hrt91+sap91)*2)**2 * .005454; hwa91=(2*hrt91)**2 * .005454; sap_ba91=woda91-hwa91;

47 woda92=((hrt91+sap91)*2)**2 * .005454; hwa92=(2*hrt92)**2 * .005454; sap_ba92=woda92-hwa92;

48 woda93=((hrt91+sap91)*2)**2 * .005454; hwa93=(2*hrt93)**2 * .005454; sap_ba93=woda93-hwa93;

49 woda94=((hrt91+sap91)*2)**2 * .005454; hwa94=(2*hrt94)**2 * .005454; sap_ba94=woda94-hwa94;

50 woda95=((hrt91+sap91)*2)**2 * .005454; hwa95=(2*hrt95)**2 * .005454; sap_ba95=woda95-hwa95;

51 woda97=((hrt91+sap91)*2)**2 * .005454; hwa97=(2*hrt97)**2 * .005454; sap_ba97=woda97-hwa97;

52

53 csapba92=(sap_ba92-sap_ba91)/sap_ba91*100;

54 csapba93=(sap_ba93-sap_ba91)/sap_ba91*100;

55 csapba94=(sap_ba94-sap_ba91)/sap_ba91*100;

56 csapba95=(sap_ba95-sap_ba91)/sap_ba91*100;

57 csapba97=(sap_ba97-sap_ba91)/sap_ba91*100;

58

NOTE: Division by zero detected at line 53 column 29.

BLOCK=2 PLOT=2 TAG=533 EAST=36 NORTH=8 CROWN=2 DBH90=5.6 RANK=3 GRD_TREE=100 GIRDLE=22 DBH91=5.6 HRT91=2.4 SAP91=0 RAD1091=0.15

RAD0591=0.05 STMLN91=37 CRNHT91=23 CRNTP91=37 STAT92=2 DBH92=5.3 HRT92=1.5 SAP92=0.9 RAD1092=0.05 RAD0592=0 STMLN92=37 CRNHT92=25

CRNTP92=37 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.

RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.

STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0

LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.15320286 BA93=. BA94=. BA95=. BA97=. WODA91=0.12566016

HWA91=0.12566016 SAP_BA91=0 WODA92=0.12566016 HWA92=0.049086 SAP_BA92=0.07657416 WODA93=0.12566016 HWA93=. SAP_BA93=.

WODA94=0.12566016 HWA94=. SAP_BA94=. WODA95=0.12566016 HWA95=. SAP_BA95=. WODA97=0.12566016 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.

```

CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=399
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=587 EAST=76 NORTH=49 CROWN=3 DBH90=4.1 RANK=3 GRD_TREE=100 GIRDLE=15 DBH91=4.1 HRT91=2 SAP91=0 RAD1091=0.2
RAD0591=0.1 STMLN91=29 CRNHT91=13 CRNTP91=29 STAT92=2 DBH92=4.9 HRT92=0.95 SAP92=1.25 RAD1092=0.25 RAD0592=0.1 STMLN92=28 CRNHT92=15
CRNTP92=28 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.09168174 BA91=0.09168174 BA92=0.13095054 BA93=. BA94=. BA95=. BA97=. WODA91=0.087264
HWA91=0.087264 SAP_BA91=0 WODA92=0.087264 HWA92=0.01968894 SAP_BA92=0.06757506 WODA93=0.087264 HWA93=. SAP_BA93=. WODA94=0.087264
HWA94=. SAP_BA94=. WODA95=0.087264 HWA95=. SAP_BA95=. WODA97=0.087264 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=. CSAPBA94=. CSAPBA95=.
CSAPBA97=. _ERROR_=1 _N_=443
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=601 EAST=70 NORTH=24 CROWN=2 DBH90=5.6 RANK=4 GRD_TREE=100 GIRDLE=21 DBH91=5.6 HRT91=2.3 SAP91=0 RAD1091=0.1
RAD0591=0.05 STMLN91=36 CRNHT91=15 CRNTP91=36 STAT92=2 DBH92=4.4 HRT92=1.25 SAP92=1.05 RAD1092=0.15 RAD0592=0.05 STMLN92=36
CRNHT92=15 CRNTP92=36 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=.
SAP94=. RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=.
CRNTP95=. STAT97=. DBH97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.17103744 BA91=0.17103744 BA92=0.10558944 BA93=. BA94=. BA95=. BA97=. WODA91=0.11540664
HWA91=0.11540664 SAP_BA91=0 WODA92=0.11540664 HWA92=0.0340875 SAP_BA92=0.08131914 WODA93=0.11540664 HWA93=. SAP_BA93=.
WODA94=0.11540664 HWA94=. SAP_BA94=. WODA95=0.11540664 HWA95=. SAP_BA95=. WODA97=0.11540664 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=454
NOTE: Division by zero detected at line 53 column 29.
BLOCK=2 PLOT=2 TAG=602 EAST=67 NORTH=22 CROWN=2 DBH90=6.5 RANK=1 GRD_TREE=100 GIRDLE=25 DBH91=6.5 HRT91=2.9 SAP91=0 RAD1091=0.25 ,
RAD0591=0.1 STMLN91=40 CRNHT91=21 CRNTP91=40 STAT92=2 DBH92=6.3 HRT92=1.75 SAP92=0.9 RAD1092=0.15 RAD0592=0.05 STMLN92=40 CRNHT92=23
CRNTP92=40 STAT93=. DBH93=. HRT93=. SAP93=. RAD1093=. RAD0593=. STMLN93=. CRNHT93=. CRNTP93=. STAT94=. DBH94=. HRT94=. SAP94=.
RAD1094=. RAD0594=. STMLN94=. CRNHT94=. CRNTP94=. STAT95=. DBH95=. HRT95=. SAP95=. RAD0595=. RAD1095=. STMLN95=. CRNHT95=. CRNTP95=.
STAT97=. DBH97=. SAP97=. HRT97=. RAD0597=. RAD1097=. STMLN97=. CRNTP97=. CRNHT97=. FIRST.BLOCK=0 LAST.BLOCK=0 FIRST.PLOT=0
LAST.PLOT=0 FIRST.TAG=1 LAST.TAG=1 BA90=0.2304315 BA91=0.2304315 BA92=0.21646926 BA93=. BA94=. BA95=. BA97=. WODA91=0.18347256
HWA91=0.18347256 SAP_BA91=0 WODA92=0.18347256 HWA92=0.0668115 SAP_BA92=0.11666106 WODA93=0.18347256 HWA93=. SAP_BA93=.
WODA94=0.18347256 HWA94=. SAP_BA94=. WODA95=0.18347256 HWA95=. SAP_BA95=. WODA97=0.18347256 HWA97=. SAP_BA97=. CSAPBA92=. CSAPBA93=.
CSAPBA94=. CSAPBA95=. CSAPBA97=. _ERROR_=1 _N_=455
NOTE: Missing values were generated as a result of performing an operation on missing values.
Each place is given by: (Number of times) at (Line):(Column).
1489 at 42:42 1489 at 42:46 1496 at 43:14 1496 at 43:18 1512 at 43:42 1512 at 43:46 1517 at 44:14
1517 at 44:18 1512 at 44:42 1512 at 44:46 1489 at 47:47 1489 at 47:54 1489 at 47:58 1489 at 47:84
1496 at 48:47 1496 at 48:54 1496 at 48:58 1496 at 48:84 1512 at 49:47 1512 at 49:54 1512 at 49:58
1512 at 49:84 1517 at 50:47 1517 at 50:54 1517 at 50:58 1517 at 50:84 1520 at 51:47 1520 at 51:54
1520 at 51:58 1520 at 51:84 1489 at 53:19 1489 at 53:29 1493 at 53:38 1496 at 54:19 1496 at 54:29
1496 at 54:38 1512 at 55:19 1512 at 55:29 1512 at 55:38 1517 at 56:19 1517 at 56:29 1517 at 56:38
1520 at 57:19 1520 at 57:29 1520 at 57:38
NOTE: Mathematical operations could not be performed at the following places. The results of the operations have been set to
missing values.
Each place is given by: (Number of times) at (Line):(Column).
4 at 53:29
NOTE: The data set WORK.ALL has 1520 observations and 93 variables.
NOTE: DATA statement used:
real time 1.92 seconds
cpu time 1.04 seconds

```

```

59 proc means noprint nway; var grd_tree ba90--ba97 dbh91--crnht97
60 sap_ba91 sap_ba92 sap_ba93 sap_ba94 sap_ba95 sap_ba97 csapba92--csapba97;
61 output out=mean mean=

```

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```
62      n(dbh92 dbh93 dbh94 dbh95 dbh97)=n_92-n_95 n_97; by block plot;  
63
```

NOTE: The data set WORK.MEAN has 18 observations and 81 variables.

NOTE: PROCEDURE MEANS used:

real time	0.22 seconds
cpu time	0.10 seconds

```
64      data mean; set mean;  
65      if block=1 and plot=1 then treat=1;  
66      if block=1 and plot=2 then treat=3;  
67      if block=1 and plot=3 then treat=4;  
68      if block=1 and plot=4 then treat=5;  
69      if block=2 and plot=1 then treat=3;  
70      if block=2 and plot=2 then treat=5;  
71      if block=2 and plot=3 then treat=1;  
72      if block=2 and plot=4 then treat=4;  
73      if block=3 and plot=1 then treat=2;  
74      if block=3 and plot=2 then treat=5;  
75      if block=3 and plot=3 then treat=3;  
76      if block=3 and plot=4 then treat=4;  
77      if block=3 and plot=5 then treat=1;  
78      if block=4 and plot=1 then treat=5;  
79      if block=4 and plot=2 then treat=3;  
80      if block=4 and plot=3 then treat=4;  
81      if block=4 and plot=4 then treat=2;  
82      if block=4 and plot=5 then treat=1;  
83      t_trees = _freq_;  
84      hec= .15 * .404686;  
85      acre=.15;  
86      if block=2 and plot=4 then hec= .10 * .404686;  
87      if block=1 and plot=3 then hec= .10 * .404686;  
88      if block=2 and plot=4 then acre=.10;  
89      if block=1 and plot=3 then acre=.10;  
90  
91      qmd90=sqrt(ba90/.005454);  
92      qmd91=sqrt(ba91/.005454);  
93      qmd92=sqrt(ba92/.005454);  
94      qmd93=sqrt(ba93/.005454);  
95      qmd94=sqrt(ba94/.005454);  
96      qmd95=sqrt(ba95/.005454);  
97      qmd97=sqrt(ba97/.005454);  
98  
99      t_den= t_trees/acre;  
100  
101      t_ba90=t_trees*ba90/acre;  
102      t_ba91=t_trees*ba91/acre;  
103      t_ba92=t_trees*ba92/acre;  
104      t_ba93=t_trees*ba93/acre;  
105      t_ba94=t_trees*ba94/acre;  
106      t_ba95=t_trees*ba95/acre;  
107      t_ba97=t_trees*ba97/acre;
```

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```
108
109      t_spba91=t_trees*sap_ba91/acre;
110      t_spba92=t_trees*sap_ba92/acre;
111      t_spba93=t_trees*sap_ba93/acre;
112      t_spba94=t_trees*sap_ba94/acre;
113      t_spba95=t_trees*sap_ba95/acre;
114      t_spba97=t_trees*sap_ba97/acre;
115
```

NOTE: Missing values were generated as a result of performing an operation on missing values.

Each place is given by: (Number of times) at (Line):(Column).

12 at 93:7	12 at 93:16	13 at 94:7	13 at 94:16	15 at 95:7	15 at 95:16	15 at 96:7	15 at 96:16
14 at 97:7	14 at 97:16	12 at 103:15	12 at 103:20	13 at 104:15	13 at 104:20	15 at 105:15	15 at 105:20
15 at 106:15	15 at 106:20	14 at 107:15	14 at 107:20	12 at 110:17	12 at 110:26	13 at 111:17	13 at 111:26
15 at 112:17	15 at 112:26	15 at 113:17	15 at 113:26	18 at 114:17	18 at 114:26		

NOTE: The data set WORK.MEAN has 18 observations and 106 variables.

NOTE: DATA statement used:

real time	0.26 seconds
cpu time	0.09 seconds

```
116      proc print;
```

NOTE: The PROCEDURE PRINT printed pages 1-4.

NOTE: PROCEDURE PRINT used:

real time	0.09 seconds
cpu time	0.06 seconds

NOTE: The SAS System used:

real time	5.22 seconds
cpu time	2.26 seconds

NOTE: SAS Institute Inc., SAS Campus Drive, Cary, NC USA 27513-2414

```
status =2
```

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1

OBS	BLOCK	PLOT	_TYPE_	_FREQ_	GRD_TREE	BA90	BA91	BA92	BA93	BA94	BA95	BA97	DBH91	HRT91	SAP91	RAD1091
1	1	1	0	52	0.0000	0.28232	0.28232	0.25966	.	.	.	.	7.13462	1.77596	1.57212	0.25962
2	1	2	0	55	40.0000	0.27631	0.27631	0.20316	0.32908	0.18666	.	.	7.08364	1.61909	1.32909	0.26273
3	1	3	0	62	11.2903	0.21126	0.21126	.	.	.	0.23043	.	6.13387	1.41129	1.28468	0.22016
4	1	4	0	90	40.0000	0.26252	0.26252	0.18298	0.30218	0.33122	0.22340	0.27179	6.85444	1.54778	1.41556	0.25333
5	2	1	0	88	40.9091	0.18409	0.18409	0.13616	0.12734	.	.	.	5.66023	1.53409	1.08125	0.24432
6	2	2	0	123	39.8374	0.17074	0.17074	0.12444	0.14288	0.18294	0.18347	0.22299	5.47724	1.48984	0.92439	0.17154
7	2	3	0	73	0.0000	0.23029	0.23029	.	.	.	.	.	6.42740	1.58562	1.09110	0.20959
8	2	4	0	77	6.4935	0.15559	0.15559	.	0.32337	.	.	0.20294	5.26883	1.28052	1.03182	0.21753
9	3	1	0	61	13.1148	0.14893	0.14893	.	.	.	.	.	4.84426	0.55000	1.57213	0.61230
10	3	2	0	104	32.6923	0.15458	0.15458	.	.	.	.	.	4.87981	0.70529	1.55288	0.63510
11	3	3	0	72	31.9444	0.12593	0.12593	.	.	.	.	.	4.53056	0.59653	1.44375	0.62361
12	3	4	0	73	15.0685	0.14241	0.14241	.	.	.	.	.	4.75890	0.60205	1.57123	0.61233
13	3	5	0	92	0.0000	0.09582	0.09582	.	.	.	.	.	3.86848	0.43478	1.33533	0.69130
14	4	1	0	99	40.4040	0.08636	0.08636	0.12048	.	.	.	0.12048	3.83838	0.42677	1.22778	0.69293
15	4	2	0	85	38.8235	0.06619	0.06619	.	.	.	.	.	3.30706	0.37412	1.18412	0.70824
16	4	3	0	119	15.1261	0.06024	0.06024	.	.	.	.	.	3.21933	0.24454	1.20210	0.82647
17	4	4	0	83	14.4578	0.06932	0.06932	3.47229	0.28675	1.26687	0.85602
18	4	5	0	112	0.0000	0.04855	0.04855	2.81161	0.19955	1.05313	0.80804

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OBS CRNHT97 SAP_BA91 SAP_BA92 SAP_BA93 SAP_BA94 SAP_BA95 SAP_BA97 CSAPBA92 CSAPBA93 CSAPBA94 CSAPBA95 CSAPBA97 N_92 N_93

1	.	0.17526	0.033978	.	.	.	-67.2794	.	.	.	.	1	0
2	.	0.13448	0.046195	0.16057	0.10469	.	-39.7059	6.4801	6.69311	.	.	2	3
3	.	0.11874	.	.	.	0.11519	.	.	.	-27.2978	.	0	0
4	.	0.14117	0.090155	0.15054	0.16242	0.15358	-17.9556	-0.6439	-4.52768	0.0000	.	6	4
5	.	0.10338	0.080579	0.08147	.	.	21.9728	26.4926	.	.	.	7	5
6	.	0.08170	0.072129	0.05452	0.10050	0.08394	12.0783	-14.4236	-2.26829	-3.8125	.	14	11
7	.	0.10283	.	.	.	.	.	.	.	.	.	0	0
8	.	0.08295	.	0.16640	.	.	.	13.3779	.	.	.	0	1
9	.	0.10529	.	.	.	.	.	.	.	.	.	0	0
10	.	0.11442	.	.	.	.	.	.	.	.	.	0	0
11	.	0.09081	.	.	.	.	.	.	.	.	.	0	0
12	.	0.10729	.	.	.	.	.	.	.	.	.	0	0
13	.	0.07452	.	.	.	.	.	.	.	.	.	0	0
14	13	0.05951	0.079028	.	.	.	6.1538	.	.	.	.	1	0
15	.	0.05553	.	.	.	.	.	.	.	.	.	0	0
16	.	0.04710	.	.	.	.	.	.	.	.	.	0	0
17	.	0.05339	.	.	.	.	.	.	.	.	.	0	0
18	.	0.03790	.	.	.	.	.	.	.	.	.	0	0

OBS N_94 N_95 N_97 TREAT T_TREES HEC ACRE QMD90 QMD91 QMD92 QMD93 QMD94 QMD95 QMD97 T_DEN T_BA90 T_BA91

1	0	0	0	1	52	0.060703	0.15	7.19466	7.19466	6.90000	.	.	.	346.667	97.869	97.869
2	2	0	0	3	55	0.060703	0.15	7.11771	7.11771	6.10328	7.76767	5.85021	.	366.667	101.314	101.314
3	0	1	0	4	62	0.040469	0.10	6.22369	6.22369	.	.	6.5	.	620.000	130.979	130.979
4	2	1	4	5	90	0.060703	0.15	6.93778	6.93778	5.79224	7.44345	7.79295	6.4	7.05921	600.000	157.510
5	0	0	0	3	88	0.060703	0.15	5.80980	5.80980	4.99643	4.83198	.	.	586.667	108.001	108.001
6	4	1	2	5	123	0.060703	0.15	5.59514	5.59514	4.77665	5.11842	5.79159	5.8	6.39414	820.000	140.007
7	0	0	0	1	73	0.060703	0.15	6.49797	6.49797	.	.	.	.	486.667	112.073	112.073
8	0	0	1	4	77	0.040469	0.10	5.34108	5.34108	.	7.70000	.	6.10000	770.000	119.802	119.802
9	0	0	0	2	61	0.060703	0.15	5.22549	5.22549	.	.	.	.	406.667	60.563	60.563
10	0	0	0	5	104	0.060703	0.15	5.32374	5.32374	.	.	.	.	693.333	107.174	107.174
11	0	0	0	3	72	0.060703	0.15	4.80512	4.80512	.	.	.	.	480.000	60.446	60.446
12	0	0	0	4	73	0.060703	0.15	5.10994	5.10994	.	.	.	.	486.667	69.307	69.307
13	0	0	0	1	92	0.060703	0.15	4.19144	4.19144	.	.	.	.	613.333	58.768	58.768
14	0	0	1	5	99	0.060703	0.15	3.97934	3.97934	4.70000	.	.	4.70000	660.000	57.001	57.001
15	0	0	0	3	85	0.060703	0.15	3.48369	3.48369	.	.	.	.	566.667	37.508	37.508
16	0	0	0	4	119	0.060703	0.15	3.32332	3.32332	.	.	.	.	793.333	47.788	47.788
17	0	0	0	2	83	0.060703	0.15	3.56523	3.56523	553.333	38.360	38.360
18	0	0	0	1	112	0.060703	0.15	2.98345	2.98345	746.667	36.248	36.248

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OBS	T_BA92	T_BA93	T_BA94	T_BA95	T_BA97	T_SPBA91	T_SPBA92	T_SPBA93	T_SPBA94	T_SPBA95	T_SPBA97
1	90.017	.	.	.	.	60.7565	11.7792	.	.	.	.
2	74.493	120.661	68.443	.	.	49.3107	16.9383	58.874	38.3862	.	.
3	.	.	.	142.868	.	73.6165	.	.	.	71.4169	.
4	109.789	181.307	198.733	134.038	163.072	84.6999	54.0928	90.326	97.4521	92.1508	.
5	79.878	74.706	.	.	.	60.6525	47.2730	47.797	.	.	.
6	102.041	117.166	150.011	150.447	182.849	66.9940	59.1459	44.702	82.4129	68.8284	.
7	.	.	.	.	.	50.0434	.	.	.	.	.
8	.	248.993	.	.	156.266	63.8745	.	128.129	.	.	.
9	.	.	.	.	.	42.8183	.	.	.	.	.
10	.	.	.	.	.	79.3310	.	.	.	.	.
11	.	.	.	.	.	43.5895	.	.	.	.	.
12	.	.	.	.	.	52.2159	.	.	.	.	.
13	.	.	.	.	.	45.7071	.	.	.	.	.
14	79.516	.	.	.	79.516	39.2793	52.1588	.	.	.	.
15	.	.	.	.	.	31.4692	.	.	.	.	.
16	.	.	.	.	.	37.3654	.	.	.	.	.
17	.	.	.	.	.	29.5400	.	.	.	.	.
18	.	.	.	.	.	28.2950	.	.	.	.	.